

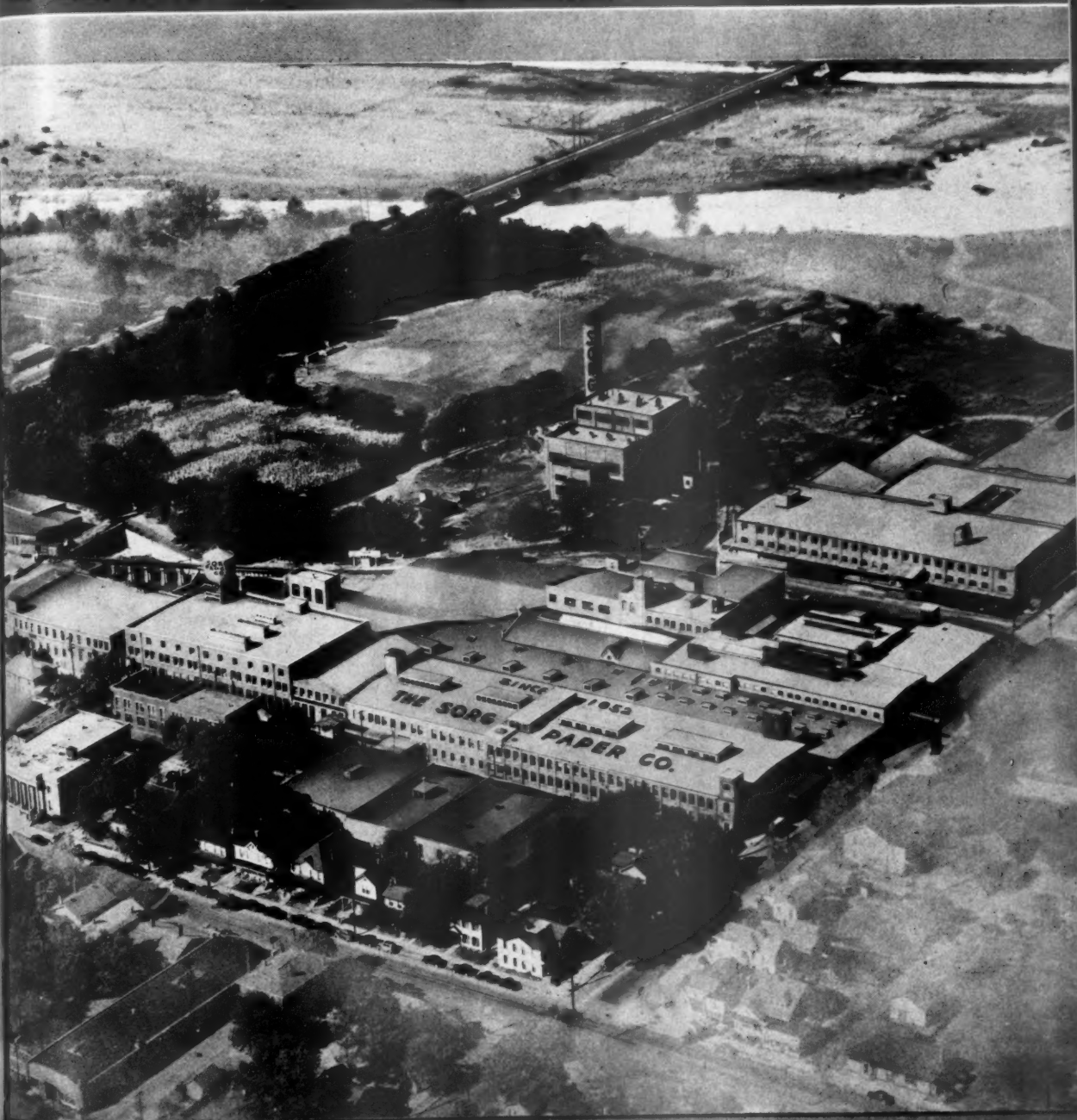
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PULP & PAPER INDUSTRY

APRIL, 1945

"The Cellulose Age"

Vol. 19 • No. 4



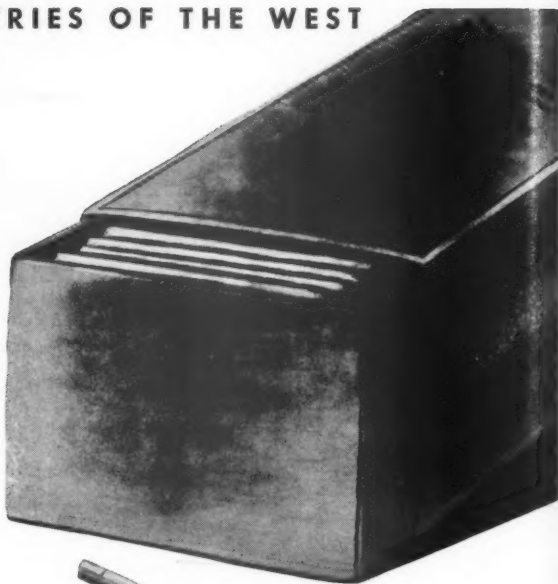
THE SORG PAPER CO.

Position strengthened by timber policy—expansion—improved equipment.... See Page 14

SERVING THE INDUSTRIES OF THE WEST

PENN SALT
Chemicals

for
the BOX
and the
MATCHES



Penn Salt manufactures
LIQUID CHLORINE
and
CAUSTIC SODA
for the Pulp and Paper Industry
also

Bleaching Powder • Corrosion Proof Cements •
Anhydrous and Aqua Ammonia • Acids •
Perchloron* • Sodium Chlorate • Potassium
Chlorate • Sodium Arsenite • Sodium Hypo-
chlorite • Hydrogen.
*Trade-mark Reg. U. S. Pat. Off.

AN ordinary box of kitchen matches can illustrate the wide variety of Penn Salt's services to Western industry.

The cardboard box containing the matches was produced by the paper industry of the West.

And this industry is well acquainted with the consistent quality of Penn Salt products used in paper production, particularly Caustic Soda and Liquid Chlorine. The matches were produced with the aid of another Penn Salt product . . . Potassium Chlorate, also used in the manufacture of explosives.

The Pennsylvania Salt Manufacturing Company of Washington is producing chemicals of high quality and wide usefulness to Western industry and agriculture. We will gladly assist any pulp and paper plant with problems concerned with the use of our chemicals.

PENNSYLVANIA SALT
MANUFACTURING CO. OF WASHINGTON



Chemicals

TACOMA, WASHINGTON

PULP & PAPER INDUSTRY

Vol. 19

No. 4

"The Cellulose Age"
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APRIL • 1945



**The Management Journal
Covering North America's
Wood Pulp, Paper and
Cellulose Industries**

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APPOINTS SOUTHERN EDITOR

WILLIAM J. "BILL" KREBS has been appointed Southern Editor for PULP & PAPER INDUSTRY. Southern headquarters and editorial offices for this magazine and Mr. Krebs have been opened in New Orleans.

The address: 513 Masonic Temple Bldg., 333 St. Charles Ave., New Orleans 12, La. The phone: Magnolia 7651.

Mr. Krebs has had long experience in the South as publisher and editor in both the industrial magazine and newspaper fields. He also has enjoyed a close and active association for more than 20 years with the forest industries of the South. His career took him into every state of the South and for years he attended Southern pine industry meetings.

He will continue to travel for PULP & PAPER INDUSTRY in all parts of the South, where more than 50 pulp and paper mills are in range of his base.

Born in Monticello, Ill., New Years' Day, 1897, Mr. Krebs moved to Lake Charles, La., when he was two years old. He received his early education there. His father, too, was an editor and publisher.

Young Krebs attended the U. S. Naval Academy at Annapolis from 1916-18 and was with the fleet on the east coast in the last World War, but a serious influenza attack forced him to abandon a naval career.

He started to specialize in industrial and business reporting in 1925 after a brief period as reporter on the San Antonio (Tex.) Express and after three years with the New Orleans Association of Commerce. He was recently southern editor for the New York Journal of Commerce.

TRIBUTE TO SOUTHERN INDUSTRY

THE viewpoint of PULP & PAPER INDUSTRY toward the great pulp and paper industry of the South is expressed in the following tribute from "Bill" Krebs (and this magazine concurs heartily):

"I have seen and reported year by year the slowly but steadily growing realization in the South that timber is a crop. I have seen the Southern pine industry change from a 'cut and get out' basis to acceptance of the doctrine of selective logging, reforestation and permanent operation. I have seen the pulp and paper industry come into the picture and make this true—and it was not possible before the pulp and paper industry entered the scene."

GOOD PUBLIC RELATIONS

THE best public relations begin—like charity—at home. An APPA official points out that some corporations spend millions in institutional advertising to sell the general public, whereas they have an important segment of that public on their payrolls and antagonize them six days a week. To keep on the right track in relations, all any manager has to do before taking any action is to ask himself: "Would I like this to happen to me?"

Weyerhaeuser Timber Co. initiated an interesting series of advertisements, publishing pictures of various pulp mill and sawmill crews in their home town newspaper and praising them for their contributions to war production.

In this issue of PULP & PAPER INDUSTRY is another interesting advertisement in which the St. Regis Paper Co. in easy-to read, easy-to-understand style frankly sets forth its financial position, its operational program and its future prospects.

Congressmen Evidently Never Heard Of Canada's Great Production Achievement

(Last month PULP & PAPER INDUSTRY stated editorially that the resolution introduced in Congress by Rep. Francis Case [R] of South Dakota, and concurred in by Rep. Lyle Boren [D] of Oklahoma, proposing to study means of making U. S. independent of Canada in newsprint production was not only fantastic but would turn the clock back on the U. S. industry some 40 years. The U. S. industry generally has gone into production of higher paper grades. This article presents other reactions to the proposal.)

● Canadian government officials and leaders of the Canadian pulp and paper industry are not entering into a controversy with Representative Francis Case of South Dakota over his implied criticism of their wartime undertaking to supply their customers in the United States. They prefer to let the record speak for itself. And the record, viewed in the light of wartime difficulties, is one of striking achievement.

In the face of a long succession of exasperating problems—of manpower and pulpwood shortage, power scarcity at certain seasons and, more recently, an inadequate supply of freight cars, the Canadian industry has made good on its commitments to the United States market.

The able performance of the Canadian industry is acknowledged in an outspoken and convincing statement by E. W. Tinker, executive secretary of the American Paper and Pulp Association, in a letter to Representative Case. Mr. Tinker declares that, far from deserving censure for being "overly realistic in serving Canada's interests," as Representative Case claims, Canada actually deserves credit for "the unselfish manner in which she has responded to our needs."

Mr. Tinker points out that Canadian

ROBERT MacLAREN FOWLER, Ottawa and Toronto attorney, appointed President of Canadian Pulp & Paper Assn., a new full-time office made necessary by expansion of association affairs.

For two years he has been secretary and counsel of the Wartime Prices and Trade Board, Ottawa. His new office will be with the CPPA, Sun Life Bldg., Montreal.



Appointment of A. E. CADMAN, CPPA secretary for 15 years, as general manager of the CPPA, also was announced by R. L. WELDON, CPPA chairman and President, Bathurst Power & Paper Co., Sun Life Bldg., Montreal.

Some say GEO. C. WINLOW (right), Director of sales, The E. B. Eddy Co., Hull, Quebec, is the industry's best story teller. He made a tour of Canada in March with side trip to Camas, Wash., for two days with his friend A. G. NATWICK, Asst. Res. Mgr. of Crown Zellerbach mill there and a pretty good raconteur himself. Messrs. Winlow and Natwick recalled days when they both worked at the old Lincoln Pulp & Paper Co., Merriton, Ont. (now Alliance Paper Mills).



woodpulp exports to the United States in 1944 were more than double those of 1938, the last pre-war year, and that despite Canada's obligation to supply the major portion of the United Kingdom's requirements, Canada's shipments to that market in 1943 amounted to only about 21 per cent of the tonnage exported by Canada to the United States.

As for pulpwood, Mr. Tinker states that Canadian shipments to the United States in 1943 were 118½ per cent of the average of the five-year pre-war period and that when Canada in 1944 undertook to share its total pulpwood output on a 50-50 basis with the United States, she actually delivered 32 per cent more than the minimum commitment.

Canadian newsprint exports to the United States, adds Mr. Tinker, were, in 1943, 112 per cent of the average of the five-year pre-war period. Actually, they totalled 2,792,000 tons as contrasted with a total overseas shipment to all other countries of only 213,000 tons. Shipments declined to 2,430,000 tons in 1944, but Mr. Tinker explains that this was more due to use restrictions applied in the United States and to Washington's insistence on delivery of fiber in preference to finished paper than to either lack of capacity or to unwillingness on the part of Canada to meet requirements.

Mr. Tinker underscores a particularly significant fact when, in answering the congressman's suggestion to encourage more paper manufacturing in the United States, he states: "Paper supply is currently limited not because of productive facilities but because manpower and equipment shortages prevent full utilization of existing facilities. . . . Our problem is not one of increasing productive capacity but rather one of taking corrective measures that will enable the industry to utilize fully existing productive capacity. Past experience has indicated that when new pulp and paper capacity is needed the industry will expand of its own volition to meet the situation."

Mill Capacity Not Used

● In Canada as well as in the United States a considerable portion of newsprint production capacity is today not

being used, either because wartime conditions have emphasized the need for greater production of other products or because the companies have found diversification to their economic advantage.

In no year since the beginning of the war have newsprint operations in Canada averaged 80 per cent of effective mill capacity. Best years in this respect were 1940 and 1941, when production from Canadian mills averaged 78.3 per cent of capacity and 78.9 per cent of capacity respectively. In 1944, average production of the Canadian mills was equal to only 68 per cent of their capacity.

The charges of Representative Case evidently arose from the announcement made before a House inter-state commerce sub-committee that there would be a reduction in Canadian and domestic supplies of wood pulp available for newsprint this year. In that connection the Newspaper Industry Advisory Committee in Washington recommended that all American newspapers cut their newsprint delivery orders by 5 per cent in April, May and June to meet an estimated 45,000-ton supply shortage.

J. E. Steinman, director of WPB printing division, said he hoped that this method of meeting the shortage could be adopted without requiring a reduction in permitted use of newsprint. The 45,000-ton shortage is about 5¼ per cent of estimated second quarter purchase of 865,000 tons, according to WPB officials. Canadian authorities have notified WPB that about 90,000 tons of newsprint is now backed up at Canadian mills because of a shortage of freight cars and other transportation difficulties. This has caused the shutdown of one Canadian mill because its warehouse space is jammed.

Spokesmen for Canada's Wartime Prices and Trade Board say that Canadian shipments of 200,000 tons a month to the United States are being maintained. Distribution of newsprint among United States customers is handled entirely by United States authorities.

Canada's minister of supply, Hon. C. D. Howe, recently referred to the freight car shortage and said that more than 10,000 Canadian freight cars are tied up in railway yards in the United States. The situation, he said, has become so serious that the Canadian government has been compelled to impose a check on the sending of freight cars across the border.

Far from discriminating against the United States consumer for the benefit of domestic customers, official figures show that Canadian newsprint mills have increased shipments to the United States during the past five years to an extent sufficient virtually to compensate for loss of Scandinavian supplies formerly available.

While Canadian shipments of newsprint to the United States were increased by 26 per cent between 1939 and 1941 and, despite operating difficulties, still were more than 10 per cent above 1939 levels last year, shipments to Canadian customers were considerably lower during 1944 than in 1939.

New England Winter Was a Ring-tailed Snapper

● The winter just past was a ring-tailed snapper in New England — as these photographs, taken on the spot by a PULP & PAPER INDUSTRY staff representative, show. These views were taken north of Sebomook Lake on the west branch watershed of Maine's Penobscot River. Of the 50 wood consuming mills in New England, 15 are in Maine, and despite a 40 per cent shortage in crews, no Maine mill has shut down for lack of wood. These photographs show why.

1. An area inspector looks at a typical pulpwood stack in the woods. At least two feet of this stack, which has recently been uncovered, are beneath the surface of the sled road.

2. Getting out the wood is sheer, back-breaking work for men who are young and husky. Some of these billets weigh as much as 300 lbs. The equipment is muscle and a steel hook in the right hand. They have first had to dig out the pile with axe and shovel. In a few minutes one man will be waist-deep in the pit, heaving up the lower logs of the stack to the level of the sled road.

3. Late in February, past the normal hauling time, these single-horse sled loads of between six and seven cords of black spruce were going from the woods to the landing stage. At this stage of a hard winter, both the horses and the husky French-Canadian haulers are tired and not at peak efficiency.

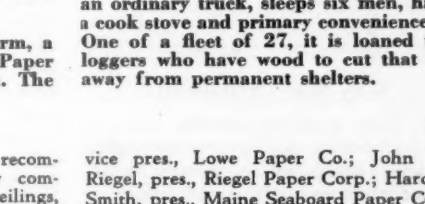
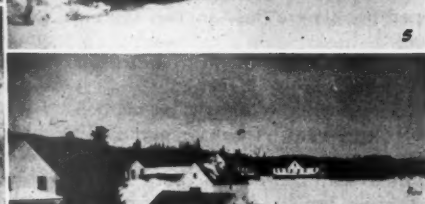
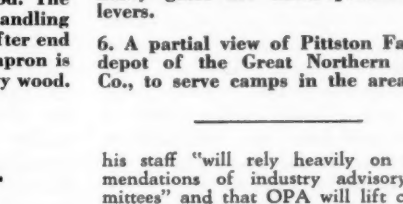
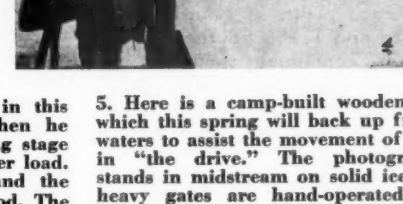
4. The only periods of rest in this French-Canadian's day are when he rides the sled from the landing stage back into the woods for another load. Note the horse's feed bag, and the shovel for digging out the wood. The driver's axe and hook, for handling the billets, are bitten into the after end of the sled. The heavy burlap apron is protection in wrestling the heavy wood.

5. Here is a camp-built wooden dam which this spring will back up freshet waters to assist the movement of wood in "the drive." The photographer stands in midstream on solid ice. The heavy gates are hand-operated with levers.

6. A partial view of Pittston Farm, a depot of the Great Northern Paper Co., to serve camps in the area. The

car belongs to an area inspector. The company keeps the roads open with tractors and scrapers.

7. This portable "camp," which can be transported from place to place on an ordinary truck, sleeps six men, has a cook stove and primary conveniences. One of a fleet of 27, it is loaned to loggers who have wood to cut that is away from permanent shelters.



Advice for OPA-- And Vice Versa?

● Gradual relaxing of price controls after war ends in Europe and future OPA policy were the subjects of chief importance to a newly organized over-all pulp and paper industry advisory committee meeting in Room 3139, Federal Office Bldg., No. 1, Washington, D. C., on April 18.

This is headquarters of the Pulp and Paper Products Price Branch of OPA, headed by J. Ronald Atwater.

Chester Bowles, OPA chief, has avowed

his staff "will rely heavily on recommendations of industry advisory committees" and that OPA will lift ceilings, item for item, as fast as supply and demand balance. Meanwhile, there may be limited relief for some book, fine and kraft papers. The APPA has presented a strong plea for relief as weight limitations and war orders cease.

It remained to be seen how far this new industry committee will be allowed to "advise" OPA and whether its advice will be heeded. It probably will receive "advice," too. The members are:

H. S. Daniels, vice pres., Union Bag & Paper Corp; Grafton Houston, sales mgr., Fort Howard Paper Co.; Malcolm Lowe,

vice pres., Lowe Paper Co.; John L. Riegel, pres., Riegel Paper Corp.; Harold Smith, pres., Maine Seaboard Paper Co.; H. R. Weaver, vice pres., International Paper Co.; Vasco E. Nunez, pres., Nashua Gummed & Coated Paper Co.; W. J. Dixon, vice pres., St. Regis Paper Co.; V. C. Hobbs, secretary, Fibreboard Products Co.; Rex Hovey, vice pres., Oxford Paper Co.; W. Irving Osborne, pres., Cornell Wood Products Co.; Arthur Schroeder, pres., Pejepscot Paper Co.; D. L. Stocker, pres., Michigan Paper Co. of Plainwell; J. D. Zink, pres., Strathmore Paper Co., and J. D. Zellerbach, pres., Crown Zellerbach Corp.

DEVELOPMENTS IN SOUTHERN U. S.

Two New Mills May Be Built... Others Will Expand Labor Costs Now Are Second Highest in the Nation

● There may be shortages in other things but there are no shortages today in rumors relating to new mills and expansion of present mills in Dixie.

But most of these projected new operations were just in the talking stage.

On the basis of availability of pulpwood, it seems that there is more logic behind expansion in such states as Texas, Arkansas and Gulf states than in the Southeastern United States although there is one extensive timber tract in west central North Carolina which has long been held as a potential mill site by one of the large northern pulp and paper companies. It is reported that another large northern enterprise now may take over and develop that tract.

After weighing all the pros and cons regarding rumored new operations in the South, it seems unlikely that more than two entirely new enterprises actually will be carried out after the war. There are four fair prospects:

1. A 250-ton kraft pulp and paper plant for which equipment already is being lined up.

2. A kraft board mill.

3. A bag and wrap plant.

4. A new tissue mill using kraft pulp which may locate in Florida.

Despite the avowed determination of a militant band of southern newspaper publishers to have their own sources of newsprint below the Mason-Dixon line, cooler heads in the pulp and paper industry do not look for any more newsprint mills.

Why More Newsprint?

● Why make newsprint when a rising market for paper of higher grades offers much greater revenue? they ask. It is no longer a secret that the southern kraft industry is now capable of making any qualities of papers as is being done in such mills at the Hollingsworth & Whitney mill at Mobile Ala., whose variety of grades makes it one outstanding example. There seems to be no limit on the duplication in kraft process of the highest quality products made by other processes.

However, the Southern News-

print Publishers Association refuses to be discouraged and its newsprint mills committee has obtained preliminary surveys of about 20 forest areas in the South, each one said to be capable of supporting a newsprint mill. They have called in engineers to study these reports which seem to be overly optimistic. This newsprint mills committee has been functioning for over a year with members from eight outstanding newspapers. Chairman is Carl B. Short of the Roanoke, Va., Times and World News. Frank Daniels of the Raleigh, N. C., News and Observer, owned by Ex-Navy Secretary Josephus Daniels, also is a member.

The successful operation of the first newsprint mill in the South at Lufkin, Texas, has encouraged them. An additional newsprint machine will increase output at Lufkin where a kraft pulp mill has been built. The kraft is now used as furnish in the newsprint manufacturing.

Two new newsprint mills have been discussed in South Carolina and Tennessee.

The successful operation of two new bleach plants in Louisiana, by Gaylord and I. P.'s Southern Kraft Division, containing some of the finest and latest equipment, point up the possibilities of the South going in for finer and higher grades of paper.

At least three existing mills in the South are planning additional paper and board production after the war, using probably all of the pulp they produce. This will take several thousand tons per month of kraft pulp off the market where it is now and has been available to other mills, at the discretion of the WPB allocations office.

Higher Labor Costs

● On another side of the picture is the increasing cost of labor. It no doubt will shock a great many operators elsewhere in the country (and will surprise many Southerners) to know that today labor costs in the southern mills are now the second highest among all pulp and paper producing regions of North America. The highest wages still

prevail on the Pacific Coast but right up in second place is the South.

In some cases the claims of an unlimited supply of wood in the South are exaggerations. Some mills in the Southeast have adequate wood supply for the future but other mills not many miles away, in the same regions, are facing a possibility of running out of wood, despite all that has been said about reforestation and the rapid growth of the Southern pine.

In a coastal belt only 200 miles long in the South, there are three mills that "eat up" a combined total of about 4,500 cords (2,700,000 ft.) of wood every day and at capacity production they would raise this consumption to about 5,000 cords.

There are a few mills in the south central and southeast states that need from 1700 and 1800 cords a day to 2,000 or more. The largest of these consumes one mile square of wood every day, taking off only six cords to an acre. In contrast, 35 to 40 cords are harvested per acre in parts of Arkansas. Clear cutting, of course, where practiced, yields a greater return. Farmers and absentee owners in many critical southeastern areas have denuded timber lands and left them in poor condition for new growth. Thirty years ago loblolly pine was yielding 25-30 cords per acre on the first cutting where today only one-half to 15 cords are cut.

However, some of the best informed industry leaders in the South are confident that adequate fire control and education of farmers to the necessity for tree husbandry will make possible a perpetual supply of timber for the industry at about its present size. They are energetically striving to increase fire protection with more lookouts and more fire lanes through timber.

It is generally agreed that only six healthy pine trees to an acre are needed for reseeding.

There is at least one mill in Arkansas that has a million acres of timberland, owned by the operating company, and other mills in that region have similar extensive hold-

ings. There is one Southeastern mill which owns three-quarters of a million acres.

It is impressive for any person to ride through mile after mile of long-leaf Pine—with their bright green long needles—the most prevalent type of pine. These are said to have bigger growth of rings, up to half an inch or so when protected from fire, and there are fewer knots than in other types of pine. It grows straighter and closer together than other types of pine—loblolly and slash.

Two years ago the Union Bag Co. at Savannah, Ga., reputedly the biggest single unit pulp and paper operation in the world, made a study that showed its wood was averaging only about seven inches in diameter at that time and it may be down now to about six inches. The pine matures for use in from 14 to 18 years but fires are a serious menace and a fire can hold back growth two or three years.

Another mill in the Southeast reports that its wood now runs 4 to 10 inches in diameter, two or three inches less than before the war.

Bigger Inventories Expected

● According to War Production Board officials, one of the postwar changes in the South will be a trend toward bigger inventories. Six or seven days inventory of pulpwood was generally considered adequate by the southern operators before the war. Recently some of them had 15 to 20 days' wood ahead, which is a record achievement in that area. However, there are some notable exceptions, with some of the largest mills being down at times to one or two days supply. These crises in mill operation, the labor problem and weather hazards have made the Southern operators more farsighted and more interested in inventories.

The government experts say twenty percent of the wood now used in the South would have been rejected before the war. Pulp mills are forced to use catfaces and poor wood now.

Besides pine, extensive use is now being made of gum, a much bigger tree.

Currently, an acute shortage of pulpwood has developed in the Virginia-North Carolina area. The reasons for the shortage include the slowness of farm workers to turn to pulpwood production since the harvest, the exceptionally high returns to farmers from farm crops

removing the incentive to earn extra money, transfer of war prisoners from pulpwood operations to harvesting, and optimism over the war situation, leading cutters to believe they are not needed.

There is one thing about Southern operators—they are not ruling out any possibilities to keep their industry thriving. There seems to be nothing they aren't willing to give trial from bamboo to cotton stems. They are testing gum for tissue, oak and maple for insulation board. Bamboo will grow prolifically and gives 42 per cent yield of air dry pulp. Cotton stems yield 24 per cent. If a use for cotton stems were ever found, it would be a great thing for the South, probably eliminating the boll weevil plague for one thing. A cotton stem semi-chemical pulp runs well over a machine with no breaks or sticking and corrugated board has been made experimentally.

Increased Mechanization

● So much Southern timber is on almost perfectly level stretches of ground that there has been an ideal set-up for mechanization in the woods. Mills have developed their own types of power sawing and wood conveying equipment. This has solved a problem for them because of the labor shortage. It has evolved a type of equipment that might be useful in Pacific Coast operations where operators are giving greater attention to the small wood heretofore left on timberlands and disdained as worthless. But on the Coast, as in New England, rough terrain is a handicap in introducing this type of equipment which the South has not had to cope with.

Mechanization in the woods has been welcome in the South, not only because of the labor shortage but because of higher labor costs. Negroes in the woods now receive up to 80 cents an hour. These high costs and the need of more manpower to handle the smaller wood as compared with smaller manpower requirements in big tree areas had threatened to deprive the South of one of its important advantages over other areas.

Unions are the exception still in the woods industries but union organizers are active. Wages are about three times what they were a generation or so ago.

There is no doubt that the Southern pulp and paper industry is very much on its toes. Although some of its advantages in mill and woods costs are being lost, the industry is

showing resourcefulness in improving efficiency, faster and better machines, techniques, etc.

Between 1925 and 1930 the capacity of the southern kraft industry increased to 3,424 tons daily, in the next five years to 4,678 tons, by 1940 to 9,840 tons and now it is over the 11,000-ton mark.

The skyrocketing demand for shipping container board was the spearhead of this rising capacity. Between 1928 and 1942—a period of only 14 years—American production of container board jumped from 1,840,500 to 3,597,700 tons. In the same period container board made from kraft pulp spiraled from 1670,000 to 1,760,000 tons. This tenfold increase in production since 1928 has been brought about almost in its entirety by the expansion of the southern industry.

These southern mills are modern, efficient and big. For example, International Paper Co. which operates in Canada, Northern United States and the southern states. Its newsprint mill at Three Rivers, Quebec, with a capacity of 800 tons is one of the largest of its kind in the world. Yet at Georgetown, S. C., this company operates a kraft container mill half as large again. This mill is no exception; there are others whose size is equally impressive.

One of the interesting southern developments are some remarkable improvements in boxboard. In one of Louisiana's mills, a tag stock is made on a Fourdrinier, something that once was thought to be impossible.

But as we have said before, there seems no limit to Southern paper pulp products. Bleached sulphate pulp is being made into high quality white papers, index board and even rayon.

Big research staffs are finding new uses for the sulphate mill effluent. It is well known that much tall oil is sold to soap companies and by-products serve to make plane landing strips, paints, etc. One Southeastern mill experimented in trying to manufacture sex hormones for cattle from sulphate effluent and gave it up. This by-product field among the Southern pine users is highly competitive and the activities of different companies are guarded with utmost secrecy. At another Southeastern mill—not one of the larger ones, either—there is a staff of 30 engaged entirely in mill effluent research (not involving commercial production as yet). What may come of all this after the war cannot even be guessed today.

SORG STRENGTHENS POSITION IN PULP AND PAPER FIELD



ON BEAUTIFUL HOWE SOUND, 26 mi. by water from Vancouver, B. C., is Sorg's combined pulp-lumber operation, thereby providing greater utilization of resources. Pulp mill is in center, sawmill on right, with dock extending between units. Just short distance off to left of picture is first modest block of timber acquired by Sorg in 1942. Like other foresighted companies Sorg has added to its timber holdings.

Expansion and Improvements in Middletown Mills And British Columbia Indicate Farsighted Policies

THESE war years have been truly decisive years for The Sorg Paper Company.

Aggressive steps taken by the leadership of that company during these past few years to assure its continued prosperity and success in the critical postwar era are interesting and instructive to management in general.

This aggressiveness should be a real source of satisfaction to its stockholders, its 900 employees, the communities in Canada and Ohio directly affected by its prosperity, its many customers and the allied industries which serve Sorg with equipment and supplies. Briefly, these are the steps taken:

Expansion and improvements at the Middletown, Ohio, mills; the acquisition in 1941 of a pulp mill in British Columbia, and of timber holdings — beginning in a modest fashion — and the adoption of farsighted utilization and manufacturing policies.

Faced with a pulp shortage when Scandinavian shipments were shut off by the war, Sorg took an option on, and later bought, the Port Mellon, British Columbia mill, now operated by Sorg Pulp Company, Ltd., wholly-owned subsidiary.

The Sorg management knows just

as well as the planners of bigger forest operations in the Far West, that the day is fast approaching when the giant trees of the coast will become more scarce for manufacturing purposes and when there will, in fact, be less market timber of any kind available. And so, Sorg has pioneered in harvesting pine cordwood in the West, where giant spruce and hemlock have long been the principal pulpwoods.

Sorg is fortunate in having in its Port Mellon mill one of the most efficient lumber mills on the West Coast.

In its 93 years of papermaking operations in Ohio's Miami Valley, The Sorg Paper Co. recently completed extensive improvements, which included a push-button system of pulp preparation which is one of the most interesting, impressive installations of the North American industry.

New Equipment

● A representative of PULP & PAPER INDUSTRY recently toured these mills and viewed these installations, which are described in detail in the latter part of this article.

Hundreds of thousands of dollars were spent by Sorg from 1940 to

1942 in modernizing its stock preparation equipment in the Sorg and the Smith Divisions of the operations. A few other companies were able to install parts of this Shartle Brothers-Dilts equipment, but here at Sorg is the most elaborate operation and the largest of the now well-known Hydrapulpers (20 ft. diameter).

It prepares 7,500 lbs. of stock in 75 minutes where a 2,200 lbs. beater used to require 3½ to 4½ hours of beating to get good results — even in the days when the best quality stock was available.

How this equipment saves power, labor and space, achieves greater speed and uniformity, as well as general cleanliness, and how one man controls the refining, treatment and flow of stock is described more fully later on.

But here it might well be stressed that the way in which all of the equipment companies involved, the mill management and the mill employees co-operated in making these improvements, deserves also to be recorded.

It has never before been told how the teamwork of all those involved scored what seems to be some kind of a world's record.

Sixteen huge beaters in the Sorg

mill and 10 beaters in the Smith mill were taken out and replaced with altogether different and more compact machines — yet, during a period of two years' construction, only a small portion of production was lost. This was calculated as only an 8 per cent loss during a 30-day period. Walls and floors were rebuilt, big beaters were juggled around, almost hanging in space, it seemed, as floors were taken out, but engineers cross-piped new and old equipment, keeping the critical wartime production of paper going "by the skin of its teeth."

HISTORY

● The present Sorg Paper Co. is a merger of many old and famous mills. When the company was consolidated in 1931 under its present name, the combining units were:

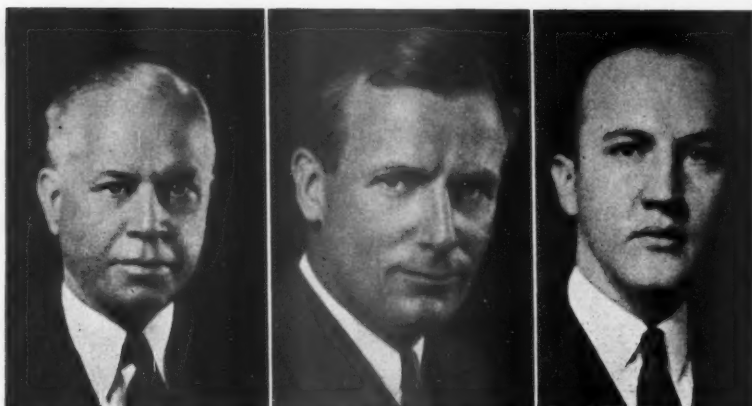
(1) The Paul A. Sorg Paper Co., which had been formed in 1899 by acquisition of the Jacoby Paper Co. (est. 1895). This mill had previously been operated as the Middletown Paper Co. (est. 1881), and before that as the Hill & Peck Paper Mill (est. 1866).

(2) The W. B. Oglesby Paper Co., which traced its history back, from its founding in 1887, through Oglesby, Moore & Co. (est. 1873), Oglesby, Barnitz, Tytus & Erwin Co. (est. 1885) to the original Erwin Paper Co. (est. 1852).

(3) The Frank Smith Paper Co., which had been formed in 1923 by the parent company for the production of kraft papers, and

(4) The Paul A. Sorg Realty Co. The original Hill & Peck Mill was the first Manila paper mill west of the Alleghenies. In an advertisement appearing in the Middletown Journal of August 5, 1866, the proprietors of the mill modestly proclaimed:

"The Manila Paper Mill — so-called from the kind of paper it manufactures is owned by Messrs. Hill and Peck. It is the only mill of its kind in the west. The Manila paper is much lighter and equally



Left to right: J. A. AULL, Chairman of the Board, The Sorg Paper Co. and The Sorg Pulp Co.; DONALD G. DRISCOLL, President, The Sorg Paper Co., and Director, The Sorg Pulp Co., and J. A. AULL, Jr., Vice President and Treasurer, The Sorg Paper Co., and President, The Sorg Pulp Co.

as strong as that of greater weight. It is very highly esteemed by merchants, and the enterprise will doubtless prove a success."

Subsequent to its acquisition by The Paul A. Sorg Co. the mill also produced tissue paper and waxing papers, in addition to manila. The W. B. Oglesby mill which manufactured a wide variety of fine paper, later developed the first satisfactory offset printing paper produced in this country. The mill also produced and still is producing high grade papers for use in manufacturing playing cards for the United States Playing Card Co.

The Frank Smith Paper Co. mill, manufactures specification kraft papers for multi-wall shipping sacks and other kraft specialties, and is a modern operation. It is named after the late A. Frank Smith who was associated with Sorg for thirty-eight years, and who enjoyed an international reputation for his developments in papermaking.

While a typical, so-called practical papermaker, he combined with this "practical" side a deep-seated interest in the "reason why" for so many of the arbitrary and rule-of-thumb methods employed in papermaking. In short, Frank Smith was a sort of connecting link between the old-school type of papermaker and the modern, technically-trained chemist or engineer who has gradually taken over the operating responsibilities of the larger pulp and paper mills. During his many years of service as vice-president in charge of production. Mr. Smith worked very closely with the men now responsible for production, technical control, maintenance and engineering at Sorg, and passed on to them his valuable knowledge

of, and experience in, the manufacture of paper.

In concluding this brief historical outline it occurs to us that there is a curious analogy between the set-up of The Sorg Paper Co. and its component mills, and the manufacturing policy of the company as outlined to us by one of its engineers.

"In the manufacture of our various grades of paper," he told us, "we follow a very definite policy of blending wood fibers . . . spruce fibers from Scandinavia and various Canadian and United States pulp mills are blended with pine from the South and hemlock from the West Coast."

It would seem that the blending of the varieties of papermaking operations and products with Sorg's sturdy pulp mill operation at Port Mellon augurs well for financial success of this 93-year-old mill in the papermaking markets of the future.

Officers and Key Men

● When J. A. (Bert) Aull, came to Middletown from Pittsburgh, in 1908, to help his brother-in-law, Paul A. Sorg, build The Paul A. Sorg Paper Co. into a profitable enterprise, he probably never realized that 37 years later he'd still be on



The late A. FRANK SMITH, associated with Sorg company for 38 years. Was Vice Pres. in charge of production.



L. C. CURRIER, Mill Mgr., The Sorg Paper Co., Middletown, Ohio.



the job — and still be building.

Of course, "Bert" Aull isn't as active in the management as he was in the two and a half decades following the death of Paul Sorg in 1913 when he took over the operation of the then small paper company. Last year he became chairman of the board and handed the reins into the hands of Donald G. Driscoll, the new president, who had actively directed affairs of The Sorg Paper Co. as executive vice president since 1938.

But Mr. Aull still keeps his hand in. The present planning for the future development of the company is bulwarked by his past experience. Under his direction during the decade and a half prior to the forming of the present Sorg Paper Co. in 1931, the component mills of the Paul A. Sorg, W. B. Oglesby, and Frank Smith companies were devel-

THE SORG MILLS' INDUSTRIAL WELFARE COMMITTEE. A few of these men will be recognized by key men of other companies. Fifth from the left in the second row is C. A. SORG, Production Mgr. Fourth from right in second row is B. C. HOPE, of the Engineering Staff, who went with ROYAL SMITH, Maintenance Engineer, to Port Mellon, B. C., just before the war to install the Black Clawson pulp machine in that mill.

Left to right:

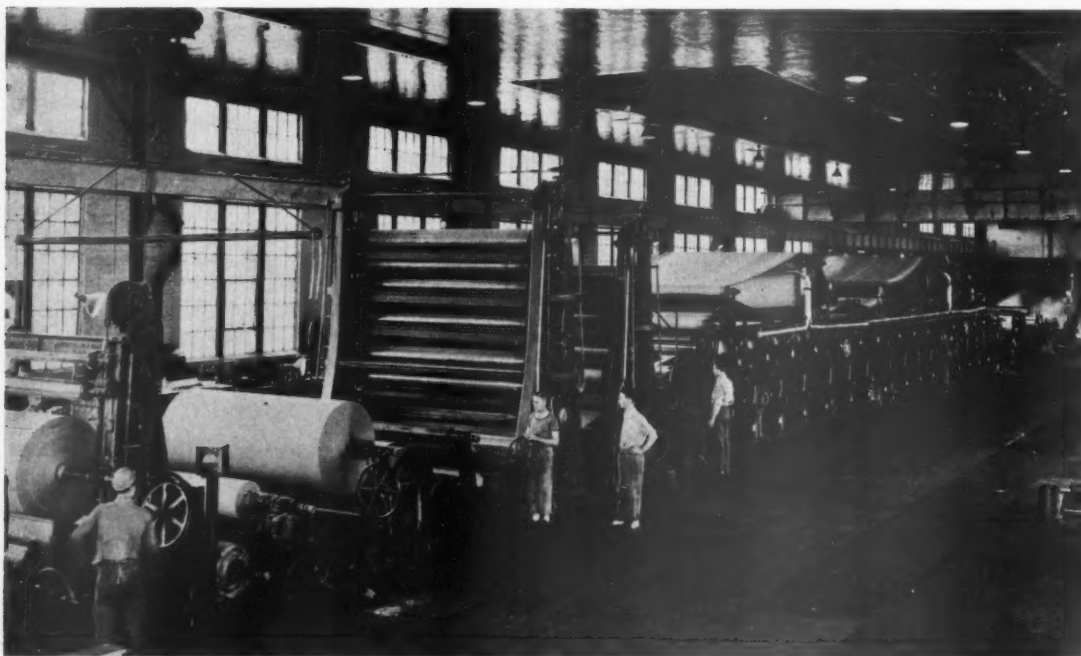
First row: Harold Harrison; Silas Fugate; George Long; Howard McGlothen; Hayden Lykins; Bud Ellis; Bob Easterling; John McGuire; George Smith.

Second row: Gordon Dunn; Arthur Nash; P. G. Swain, Receiving Foreman; De Witt Yost, Assistant Technical Director; Claude A. Sorg, Production Manager; William Gallop; Elizabeth Laico, Plant Nurse; C. J. Tranter, Director of Industrial Relations; B. C. Hope, Mill Engineer; Aaron Fields; Chester Hatfield; Winfred Lovelace, Tour Foreman.

Third row: James Selby, Yard Foreman; Grover Arnold; John Pearce; William Hefflin, Arthur Weber, Price Fletcher, Earl Whitt, Harold Flatter, Joe Wagner, Bill Pressler; Dorsey Morrison; Walter James; Jim Maines.

Fourth row: Earl Epperson, William Brown, George Pergram, Dewey Baker, Frank Loop, Walter Doench, Solomon Foster.

BELOW: The No. 6 Kraft Fourdrinier machine (Horne) in Smith Division, The Sorg Paper Co., Middletown. Shartle-Dilts pulp preparation equipment for this machine is described in this article and shown in a number Photos 4-17. No. 6 machine trims 114 in., has run at 1100 FPM, but 1000 FPM is a better top speed and is equipped with vacuum type "Impco" Saveall. It was recently fitted with a new Valley Iron Works headbox; has Sheehan carrier ropes, single calendar stack, Pope type uniform speed reel. Cameron Machine Co. winder is shown at extreme left.



AT PORT MELLON, B. C.:

Top view: Cutting timber on 10-foot Canadian Sumner Iron Works band mill. Some wood goes to pulp mill; other to sawmill.

Middle: Wet end of 112-inch Black-Clawson Pulp Drying Machine installed in 1941.

Lower: Dry end of the Black-Clawson Pulp Machine.

oped and expanded into healthy and profitable organizations.

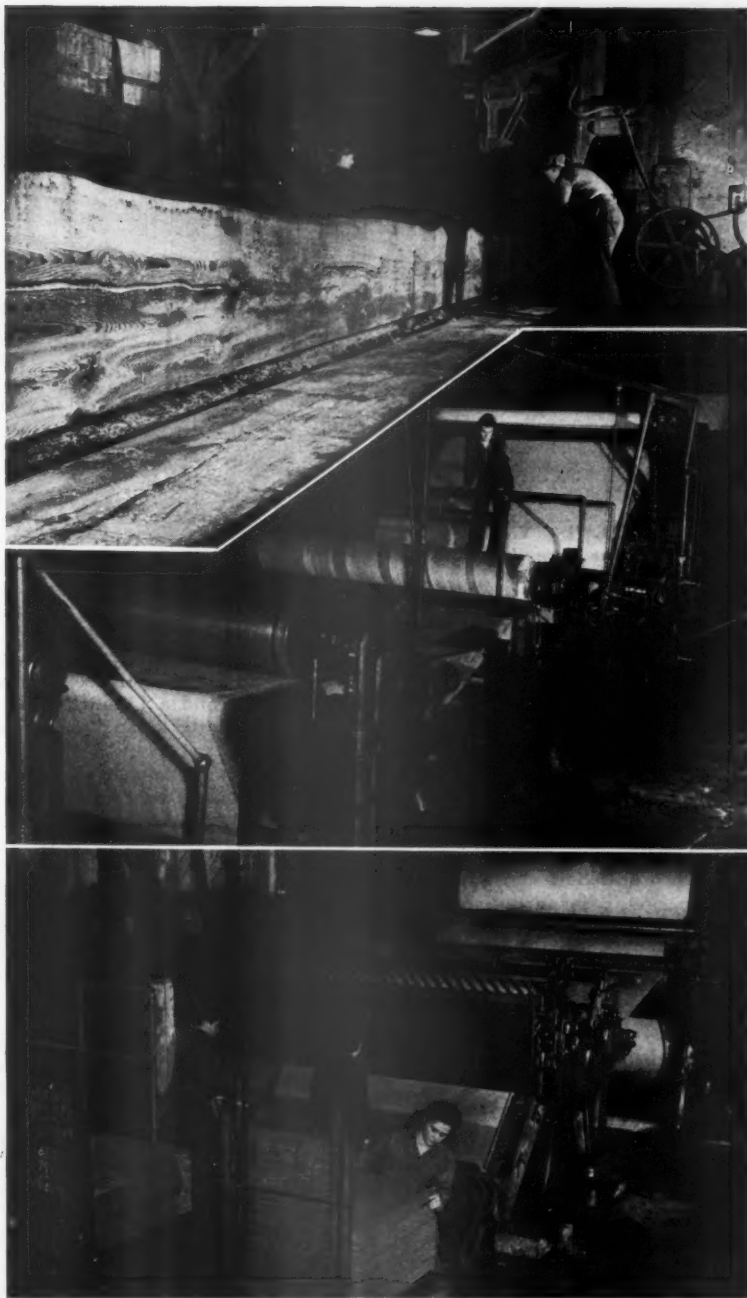
However, this is no "one-man show." Don Driscoll has been a pretty busy man himself — both as executive vice president and as president — in outlining and carrying out the working details of the current expansion program.

Mr. Driscoll, who stepped into the purchasing and sales end of the Sorg organization directly upon his graduation from Sheffield Scientific School of Yale University in 1920, has progressed in direct ratio to Sorg's growth. He had successively been secretary, executive vice president and president. Under his direction, the company has not only survived the rigors of wartime restrictions and shortages in the paper industry, but laid a firm foundation for future expansion and progress. In addition to this, Mr. Driscoll is serving as a member of the Overall Paper Industry Advisory Committee, and the Pulp Allocations Industry Advisory Committee of the WPB in Washington — as well as president of the Middletown Civic Association and chairman of the Committee for Economic Development, in the Middletown area.

From his right hand men in the Sorg organization, Mr. Driscoll has had the sound advice and willing co-operation of such key men as John A. Aull, Jr., vice president and treasurer; H. C. Johnson, vice president in charge of sales; A. D. Sherman, director of purchases; and L. C. Currier, mill manager. Between them all they have done a job of far-sighted planning which should prove profitable when the paper business gets back into stride after the war.

There are about 550 employees of the Middletown mills. Among other key officials and technical employees are:

R. B. Roe, technical director, who is well known in TAPPI circles; C. A. Sorg, production manager; G. H. Suhs, power and electrical engineer; Royal H. G. Smith, maintenance engineer; B. C. Hope, mill engineer, De Witt Yost, assistant technical director, and C. J. Tranter, director of industrial relations.



Canadian Pulp Mill Acquired

● Take the Port Mellon, B. C., pulp mill operations of Sorg Pulp Company, Ltd., for example.

Early in 1940 it became apparent to the Sorg management that it was facing a very serious pulp shortage. The Scandinavian pulp which they had previously purchased and upon which they depended for the bulk of Sorg's operations was no longer available because of the war. Unless production was to be greatly curtailed after inventory stockpiles were

depleted, additional sources of pulp had to be found.

The first ten months of 1940 were spent in surveying possible new sources of raw materials and analyzing anticipated needs of the Sorg mills. The most important problem was to determine what steps should be taken to insure a dependable, adequate source of supply of proper quality pulp to replace the Scandinavian source. Since unbleached kraft pulp was the largest



HUGH M. LEWIS, Vice Pres. and Gen. Mgr., The Sorg Pulp Co., Ltd., Port Mellon, B. C.

item, from the standpoint of tonnage, that had theretofore been imported, the search centered on securing the output of a kraft pulp mill.

As a result, Sorg entered into a contract in Nov., 1940, with the Vancouver Kraft Corp., Ltd., by which Sorg agreed to purchase the entire production of the Vancouver firm's Port Mellon mill for a two-year period, with an option to buy the mill at any time during those two years.

This move temporarily solved the most pressing need—that of a dependable source for a substantial part of their unbleached kraft pulp requirements. Early in 1941, Sorg decided that it should control the source of supply on its entire 30,000-ton annual requirement of kraft pulp, both from a tonnage and quality standpoint, and exercised its option to purchase the pulp mill in July 1941. Sorg embarked, immediately, upon an expansion and improvement program that has tremendously increased the efficiency of the pulp company operation.

Pulp Production Stepped Up

● Since the purchase of the Port Mellon mill, its daily production has been stepped up from 60 tons to 90 tons and is expected to go to 100 tons a day by mid-1945 and then on up to 120 tons. In addition, the laboratory and production controls set-up at the pulp mill together with the close cooperation between the technical and operat-

ing departments at the Port Mellon mill and the Middletown plant have achieved a high quality standard in kraft pulp. As evidence of this, Sorg can show that their tests on specification kraft, which is the principal product made from Port Mellon pulp, are higher than at any time when they were purchasing the best qualities of Scandinavian pulps and blending them for this same grade of kraft.

The Sorg Pulp Co., Ltd., which operates the mill on the west side of Howe Sound, 26 miles from Vancouver, B. C., is a wholly-owned subsidiary of The Sorg Paper Co.

The operation consists of a saw-mill which combines the breakdown of pulpwood for chips and the production of high grade lumber. The present daily output is 70,000 to 80,000 f.b.m. of lumber, and 100,000 to 120,000 f.b.m. to pulp and fuel. The pulp mill is a kraft operation of 120 tons daily capacity, equipped with four rotary digesters of three tons capacity, nine diffusers, standard screen room equipment, four rotary recovery units of the Murray Werent type and a 112-inch Black-Clawson cylinder board machine with 91 dryers.

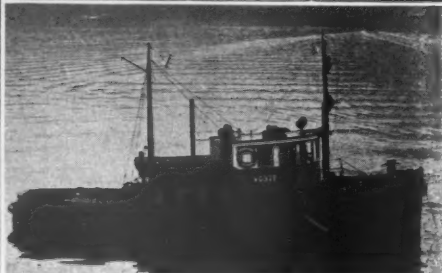
The output of this machine, dried to 92% air dry, is baled, pressed, and loaded into freight cars which are transported by car barge to

Vancouver. The bulk of the tonnage of pulp produced at Port Mellon is used by Middletown mills and the balance is exported under wartime regulations as directed by the Canadian Pulp Controller.

The pulp company has pioneered in harvesting of pine cordwood for use in the making of pulp, and for the past two years has carried out an operation in the Caribou district which produces 1,000 cords of pulpwood per month. This wood, in 4-foot lengths, is loaded on cars and carried by rail on the Pacific Great Eastern Railway to Suquamish, where it is transferred by car barge and towed to Port Mellon. The balance of the mill's requirements are secured from contractors and by purchases in the open market.

Post-War Value Seen

● In its relation to The Sorg Paper Co., there are many post-war possibilities inherent in the Port Mellon operation. The pulp mill is so situated that ocean-going freighters can be loaded directly from the dock in front of the mill. This is a distinct advantage so far as overseas shipments are concerned and it is entirely possible, that, at some time after the war, shipments from the pulp company to the paper company will be handled

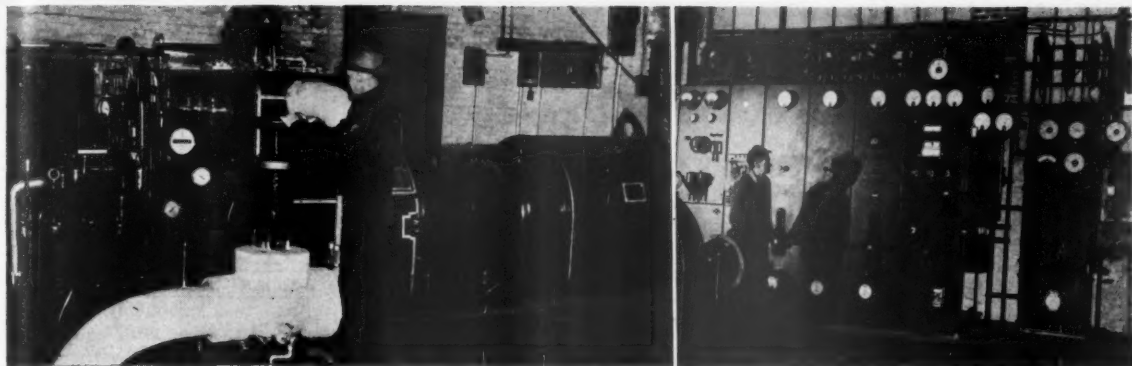


MORE VIEWS AT PORT MELLON:

Left: 84-inch Carthage Machine Co. multi-knife (10-knife) chipper. This type of chipper increases the rate of production (more cuts per minute) and improves quality of chips (in effect, the wood doesn't have time to bounce appreciably between cuts and this increases uniformity). The Port Mellon machine is presently limited by ability to get wood to it, but is capable of chipping over 40 cords per hour. The motor in foreground was 440 volts when it came from the Middletown mills. It was rewound for 2300 volts; a difficult job accomplished by the mill, requiring re-designing.

Upper right: Transporting 12 400-lb. bales of pulp from machine room to car-barge with lift truck.

Lower right: Port Mellon recently acquired a new diesel tug, "Hyack," for towing cordwood barges and logs.



BOILER PLANT equipment at the Port Mellon mill is among comparatively new installations. View at left shows G. MORRISON, Steam Engineer, at throttle of 1500 kw. Westinghouse turbine, which operates in conjunction with 500 kw. Bellison & Morecom steam engine. Power supplied for both lumber and pulp mill. Steam is used in cooking and drying pulp.

At right: Westinghouse power switchboard for both pulp and lumber mills.

by steamer to New Orleans and by river barges to Cincinnati. From there the pulp can be trucked to Middletown. It has been estimated that, by this method of transportation, savings of from \$2.00 to \$3.00 per ton on the pulp could be effected.

Practically all of the Port Mellon pulp received at Middletown is used in the production of specification kraft for The Raymond Bag Co. of Middletown. This kraft is used in manufacture of multi-wall paper shipping sacks. Nearly all of Raymond's production is used in the shipment of domestic and overseas war products that require waterproof packing, such as synthetic rubber, thermite, soap chips, dry chemical products, soy beans, sugar, salt, fertilizer, pigment colors, etc. Raymond also makes hundreds of thousands of smoke-mix bags to hold the smoke powder used in laying down smoke screens.

There are 350 employed at Sorg's Port Mellon mill, and the town has a population of slightly more than 600. The mill is electrically-operated by means of steam power generated from hogged fuel, part of which is produced in the sawmill and the balance purchased from other mills in the district.

Since taking over the Port Mellon operation in 1941, Sorg has made extensive improvements both in the sawmill and the pulp mill in order to put the entire operation on an efficient basis. Additional improvements planned for this year include:

- Improvement of water systems and power development;
- Construction of a hotel and additional houses;

- Construction of yard storage for cordwood, with adequate conveyors, etc.;
- Improvement of booming facilities;
- Replacement of old diffusers.

Key Executives

● While a great deal of the planning for Port Mellon expansion was done by the Middletown management, a large part of the credit for successfully carrying out the plans belongs to key executives of the pulp company—John A. Aull, Jr., H. M. Lewis, C. M. Belden and L. G. Harris.

John A. Aull, Jr., president of the pulp company, and vice president and treasurer of the paper company, first joined Sorg in 1923. He was educated at the Salisbury

School, Salisbury, Conn., and at Sorbonne University in Paris, France. In 1928, he left the Sorg organization to engage in the brokerage business in Wall Street, but returned to the paper company in 1936 where he has been active in management of that company, as well as serving in his present capacity with the Sorg Pulp Co., Ltd.

H. M. Lewis, vice president and general manager of the pulp company, began his career as an engineer and draftsman for the Canadian Northern Railway. Following five years with the Canadian Army overseas in World War I, Mr. Lewis joined Provincial Paper, Ltd., at Port Arthur, Ont., in 1919, where he remained as chief engineer until 1929, when he went to Pacific Mills, Ocean Falls, B. C. In Oct. 1944, Mr. Lewis was engaged by Sorg to manage the Port Mellon operation.

C. M. Belden, resident manager at Port Mellon, is a native of New York State whose experience for the past 25 years has been exclusively in the papermaking field. Among



H. M. LEWIS, Vice Pres. and Gen. Mgr.; L. G. HARRIS, Asst. Res. Mgr., and C. M. BELDEN, Res. Mgr., Port Mellon Mill.

Sorg has worked out with its employees a harmonious program for the settlement of all issues that might cause friction between management and workers.

Under an overall industrial welfare committee are grouped a number of sub-committees:

The steering committee, whose function is to determine policies and programs, and which is composed of the mill manager, director of industrial relations, president of the local union and chairman of the grievance committee;

Absentee committee, set up to reduce absenteeism;

Safety committee, organized to help reduce accidents;

Suggestion committee which passes on suggestions for improvements and makes awards for the most worthwhile ideas;

Transportation committee, to assist employees in arranging for gas rations, share-the-ride program and bus schedules;

Wage committee, composed of management and labor representatives, which passes on the merit of employees to determine their eligibility for wage increases.

All in all the comprehensive program under the direction of the industrial welfare committee has proved highly satisfactory to both employees and management. It has en-

abled Sorg to maintain maximum production of essential war papers without needless, costly delay due to labor difficulties.

Stock Lines and Special Papers

● The three divisions at Middletown—Sorg, Oglesby, and Smith—produce a wide variety of papers . . . from flimsy facial tissue to sturdy tag stock. Their total average daily production is approximately 250 tons.

Sorg's stock lines of papers include: White Sorex, Cream Sorex, Equator Offset, Equator Index Bristol, No. 1 Jute, Buckhide Tag, Valley Cream Post Card, Middletown Post Card, DIP (dyed-in-pulp), and DBL (double bleached lined). The two latter grades are produced especially for the converting trade.

But Sorg is probably most widely known for its manufacture of papers for special requirements. Among special grades which Sorg has produced or is producing are: bag, bottle cap, drawing, drinking cup, duplex, kapok insulation, soda straw, playing card, telephone book cover, tire wrap, waxing, gumming, and a long list of others.

There are six papermaking machines in operation at Sorg's Middletown mills. In the Sorg division there is one Fourdrinier machine trimming 110½ inches; one cylin-

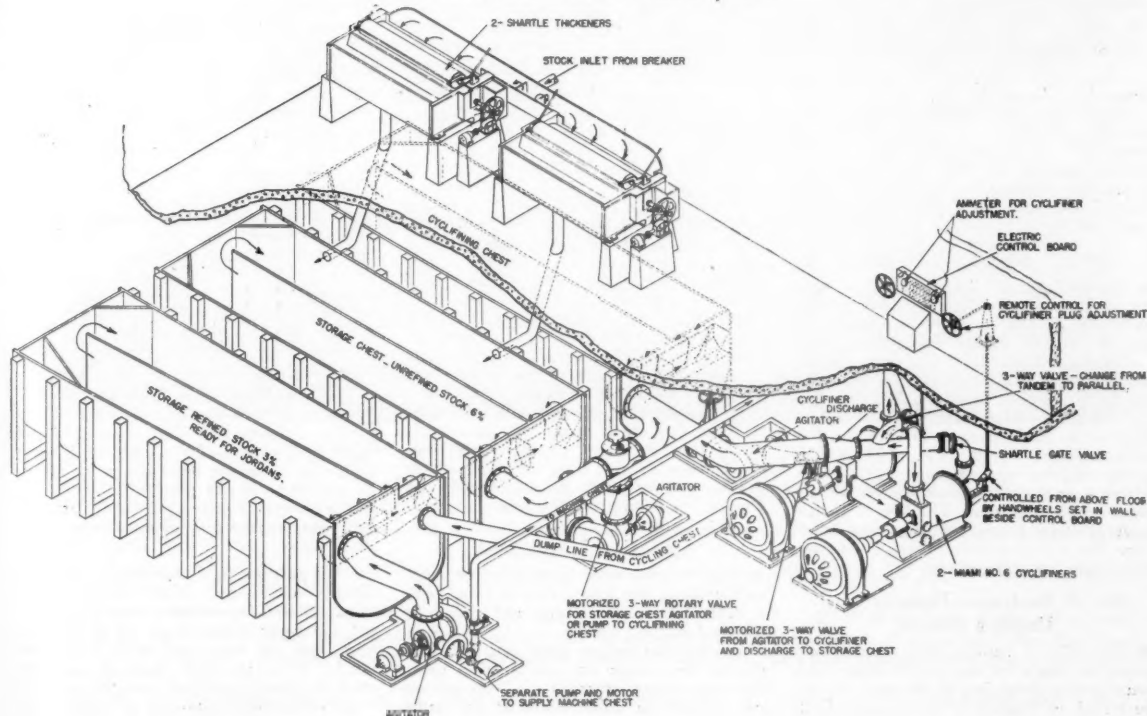
der machine trimming 80 inches; and one facial tissue machine trimming 108 inches. In the Oglesby Division there are two Fourdrinier machines trimming 108 inches and 102 inches. And in the Smith Division there is one Fourdrinier machine trimming 114 inches. Four of these machines are equipped with large, vacuum-type "Impco" save-alls.

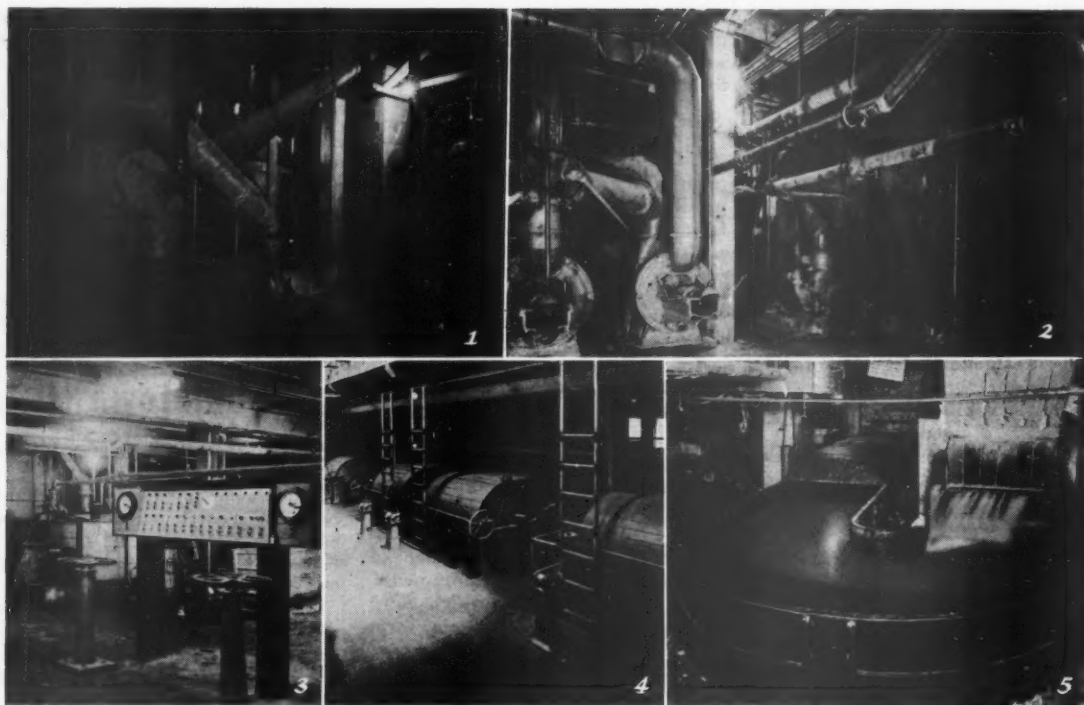
Stock Preparation At Middletown Mills

● In anticipation of the great increased demand for all types of papers after normal peacetime, production is resumed, Sorg has spent hundreds of thousands of dollars within the past five years in modernizing its stock preparation equipment.

Inefficient and obsolete units have been replaced by new equipment—cyclefiners, hydropulpers, large tile chests, and all accessory units—which has reduced stock preparation at the Sorg mills almost to an exact science by weighing, measuring and "timing" all operations. Under these conditions the uniform consistency and treatment of stock delivered to the machine results in uniform caliper and quality of the finished papers. In addition, very substantial savings in labor and

FIG. 4—REFINING SYSTEM OF SHARTLE AND DILTS DESIGN, AS FIRST INSTALLED IN SMITH DIVISION, THE SORG PAPER CO.





VIEWS OF NEW AND OLD EQUIPMENT.

1. On No. 2 system in the Sorg Division, No. 4 hydrafiners are used, and again a neat piping arrangement is possible. Note control shaft running up through floor above to control board.
2. Filler chest agi-flo pump at center, liner chest agi-flo at right on No. 2 system and No. 6 hydrafiners (left) on No. 1 system.
3. Here one operator controls the entire furnish. Handwheels adjust hydrafiners below, with resulting power recorded on time chart. Push buttons and indicator lights permit the operator to manipulate the equipment. It's like playing a pipe organ.
4. Two rows of five beaters each were formerly used in the Smith mill. In order to reach proper consistency octagonal washers were used on each. Stock came from breaker beater at 2½% and was gradually brought up to 6%, indicated by a drag type control.
5. Stock is fed to the breaker beater from same floor level as Photo 6 which is same level as machine room. All broke from machine is dropped directly through hole in floor to breaker beater level.

power have been effected.

To anyone accustomed to beater room practice, the stock preparation at Sorg seems practically effortless and almost miraculous. There are four complete hydrafiner systems in operation. They range in capacity from 12 to 80 tons and each system is complete in itself.

No. 3 System—Tissues

● Twelve tons of facial tissue is produced daily on the No. 3 System, shown in Figure 1. Use is made of one of the old 1500-lb. beaters which acts as a pulping unit only. From the beater, stock dumps directly into a tile chest below to which is connected a No. 14 Class "L" agitator—piped and valved to deliver either back to chest or into the No. 4 hydrafiner. A 15 H.P., 900 R.P.M. pump delivers approximately 3000 G.P.M. at 4 to 4½% consistency, which assures ample agitation. The No. 4 hydrafiner provides excess refining capacity so that the 12 tons now being run may eventually be stepped up.

No. 2 System—Boards and Duplex Sheets

● The No. 2 System has a daily capacity of from 36 tons to 40 tons—with some grades dropping to 24 tons. As will be noted in Figure 2, this system feeds

to a cylinder board machine on which is made tag, ticket, telephone book cover, bottlecap, duplex sheets, and wrappers, as well as other cylinder specialties.

Batches of 3,000 lbs. are pulped at 6% consistency in a 14-foot hydropulper, driven by a 150-h.p. motor. The pulper dumps alternately to two tile chests, each fitted with 8-inch HMS circulating pump, valved so as to discharge either back to the chest or to the inlet of a No. 4 hydrafiner, driven by 200-h.p. motor at 1750 r.p.m. The hydropulper is located between the chests as shown in Photo 1. The 8-inch HMS pump is also used to "throw over" the stock to either the filler or liner chest, a single 3-way Hope type motorized valve permits recirculation in the chest alone, or pumps directly into the inlet of the hydrafiner, or delivers to the liner or filler chests at the rate of 2000 g.p.m. Motors on pumps are 40-h.p., 860-r.p.m.

Agitation Important

● For maintaining suspension as well as blending, the filler chest is fitted with a No. 16-5 agi-flo pump and the liner with a No. 14-5 agi-flo.

It might be well to point out here that the agi-flo pumps are combination units that recirculate upwards of 2700 gallons per minute in chest while at the same

time delivering 300 gallons to the jordan ahead of the machine. The circulating portion of the pump creates a constant suction head on the delivery portion, resulting in constant delivery rate.

Since all valves are motorized and are of the rotary type, limit switches indicate their position (open or closed) on the main control board by means of red and green lights. Likewise chest levels are so indicated, and with handwheel controls brought through the floor from the hydrafiners below, one operator controls the entire system.

The handling of pulp to the Hydra-pulper has been simplified. The Hydra-pulper is located so that it may be fed from a low level by means of a skip hoist—or from the floor above by means of a chute. Entire charge is thus placed in pulper at once, and motor started, resulting in almost instant pulping to slush form.

The pulping is "continued" to completely defiber and when dumped thru 1-inch holes in screen plates surrounding the rotor a matter of 12 to 15 minutes later, no unpulped stock is left behind. Thus the first step in uniform stock is taken—weighed quantity of pulp—plus measured quantity of water plus

classification through 1-inch holes means uniform furnish to hydrafiners. After a "timed" interval through the hydrafiners, an additional measured quantity of water is added to bring to proper consistency for jordaning. Wash-down water is thus taken into consideration, and any slight irregularity in inconsistency of stock being thrown over to filler (or liner) chest is immediately smoothed out by the intermixing prin-

ciple of the agi-flo pumps.

A complete log of operations is kept. Every change in valve setting as well as every change in chest level is tabulated. This together with recording of power curves on the hydrafiners permits duplicate runs to be made with far more accuracy than formerly possible with beaters.

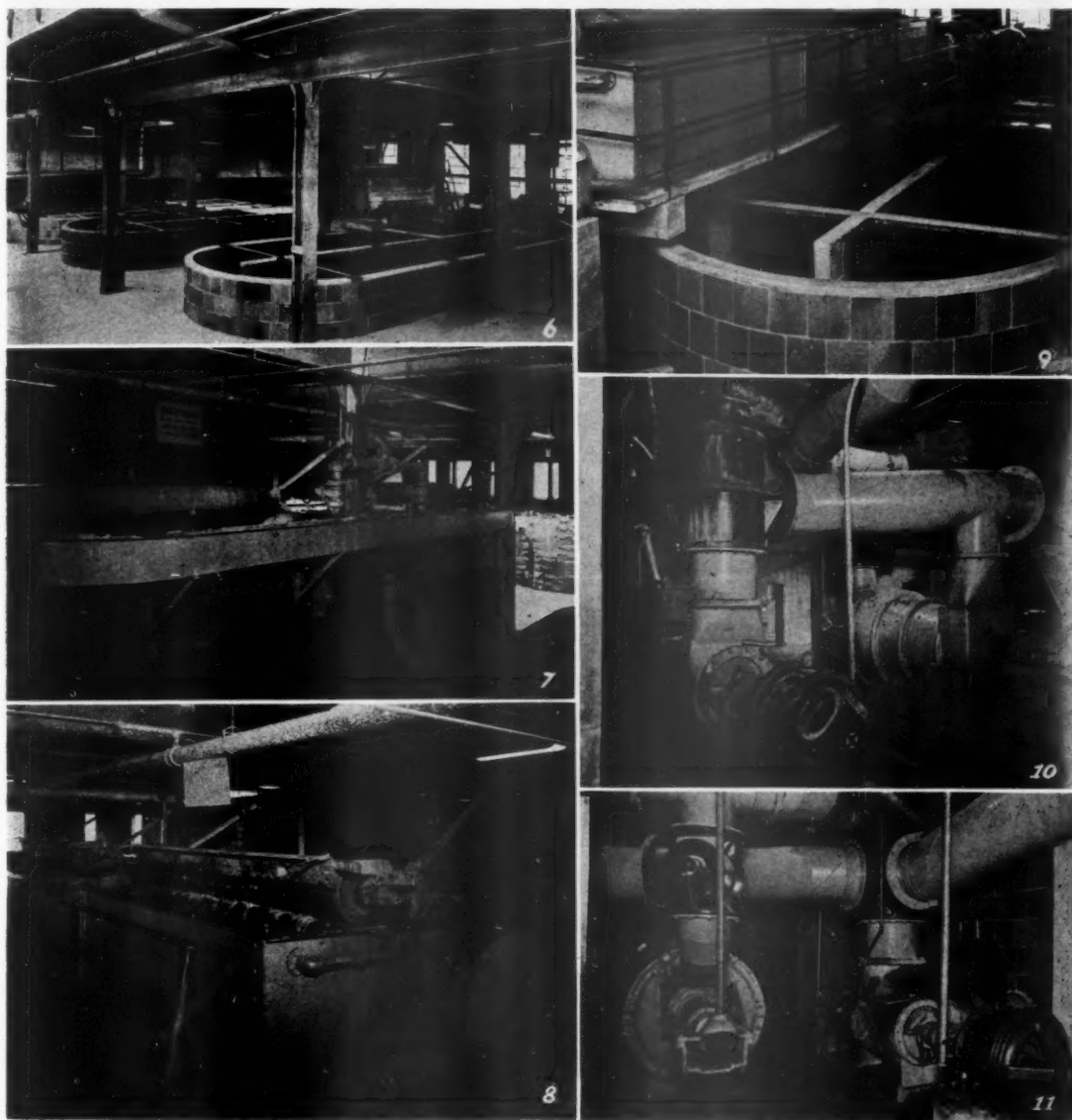
The No. 2 system (Fig. 2) throughout uses a minimum of piping as evidenced

by Photo 2. The two No. 6 hydrafiners at the left of the photograph are part of the No. 1 System now to be described.

No. 1 System

● The No. 1 System produces 60 tons of kraft, bogus, bonds, waxing, cup stock, album paper, and their famous extra heavy fourdrinier Sorex.

Figure 3 shows the general hookup as well as actual relative arrangement in



MORE VIEWS OF STOCK PREPARATION EQUIPMENT.

6. Today the same room as shown in Photo 4 reveals only three chests to process more stock. This picture was taken during the setting of the thickeners. Note accessibility and visibility.

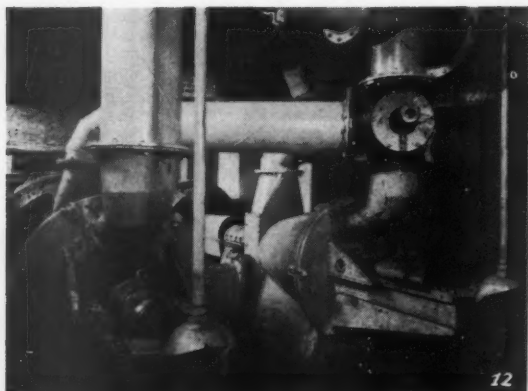
7. Stock from breaker beater in Smith mill arrives at thickeners through vertical pipe at center. Pipe in lower center is white water return.

8. Thickeners for consistency control in this mill have doctors on upcoming side of couch roll. With free stock, consistency up to 7% is reached.

9. Thickeners discharge directly to the tile chest of 5½-ton capacity. Midfeather of chest is cross anchored at top.

10. Some of the largest rotary plug valves in use today (24"), using master gear reducers, direct stock from the Class L agitator on chest "B" (see Fig. 5). Gearmotor operated (at top of picture), they have functioned over a long period of time without sticking.

11. Agitator feeding hydrafiner. By use of overhead piping to hydrafiners, the aisles are kept free and good house-keeping is easily attained.



12



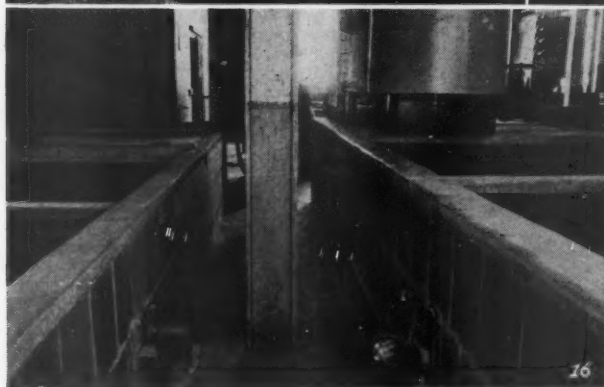
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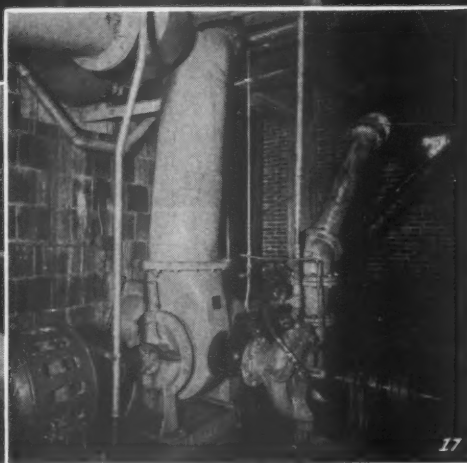
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17

MORE VIEWS OF PULP PREPARATION SYSTEM IN SMITH MILL.

12. Three hydrafiners prepare pulp for up to 80 tons of multi-wall sewed kraft bag per day. Note control shafts going to handwheels above. There was no special cleanup for this picture—it represents average cleanliness.

13. Push button stations and indicator lights are grouped so that this control board literally becomes the heart of the system. Seldom is it necessary for the operator to be 20 ft. from this point. These one-man control panels were largely conceived and executed by Harold Suhs and Royal Smith, Sorg engineers, aided and abetted by Shartle Bros., engineers. Cutler-Hammer pushbuttons, Westinghouse indicator lights and Mercoid flat switches were used.

14. Stock enters 6-ton chest on each side channel from overflow baffle built into chest and returns to agitator unit by way of center channel. A slight overflow of incoming stock into the center channel prevents stagnation at the wall and aids in blending.

15. Tools of the present day paper maker—Indicator lights for position of units, tabulation sheet for record, recording meters for power, and adjusting handwheel or hydrafiner plug movement. A far cry from the previous heater practice.

16. Mercoid switches near floor on sides of chests, actuated by floats inside chest transmit chest levels to control board. Note how chests protrude through floor sufficient to prevent foreign material contamination.

17. Chest "C" circulating agitator provides adequate suspension for chest contents and constant suction head to centrifugal pump feeding to machine.

the mill.

In this system an especially noteworthy feature is the ability to change from one cycling chest to the other without shutting down the No. 6 hydrafiners. They are merely backed off momentarily, the valves rearranged by pushbutton control, the agitator pump again started and the hydrafiner plugs set up to the same power curve as before.

The three chests are located in the basement, the control board (Photo 3) is on the floor above, and the hydropulper is charged from the second floor above either by skip hoist or manually.

Incoming pulp and "broke" arrive on the top floor by elevator or is loaded into the skip hoist on an intermediate mezzanine floor, from where it is conveyed upward and into pulper. A 7,000-lb. batch requires approximately 9 minutes to fill with water, add pulp and slush to the point where no pieces larger than a quarter are noticeable. Since additional time is available and also beneficial, the average pulping time is 30 minutes.

The dump valves are hydraulically controlled from the feeding floor level, the stock being classified in transit by 1-inch diameter holes in perforated plate surrounding the rotor. At 6% consistency, a 7,000-lb. batch will dump clean in 1½ minutes. Gravity flow places the stock in alternate cycling chests.

The cycling chests are of sufficient capacity to permit hydrafining at 6% and then to dilute to 4% before throwing over to machine chest. On the No. 1 System (Fig. 3) stock is jordaned direct to machine, hence uniform consistency and constant delivery to the jordan is an absolute necessity. A No. 20-6 agi-flo pump fulfills this requirement admirably.

Approval of Operators

● The final test of any system is whether it produces what it was designed to produce, and whether the men who operate it like it to the point that they take pride in its operation and upkeep. Both these requirements are met at Sorg's.

Prior to the installation of the three systems previously referred to, the mill operated beaters, and the beater room was closely packed with tubs over whose sides each pound of stock had to be lifted.

The operator of the control board remarked: "That Hydrapulper will take anything you can put in it—as fast as you can put it in. If you happen to drop a few wires in by accident, it just rolls 'em up into a ball and it doesn't hurt a thing."

To gauge whether the man was qualified to compare the new system with the old, the visitor asked: "How long have you been here?"

"Seventeen years—I worked on the beaters before they put in this system and believe me, there just isn't any comparison!"

Acceptance Through Trial

● Why did Sorg throw out an existing beater room and put in three new systems all patterned along the same lines and using hydrafiners for the development of fiber characteristics? The decision was the result of an equipment trial in the Smith Division.

Back in 1939 the Smith Division had ten 2500-lb. Horne type beaters (Photo 4) filling the beater room and driven from line shafts below. Needing more refining capacity, they were forced either to install more beaters or to turn to some other method of preparing their

stock.

They decided to give hydrafiners a trial by attaching to their existing chests, and let the beaters remain for immediate start-up if the hydrafiners were found wanting.

Their stock was and still is pulped in a Shartle breaker beater (Photo 5) at 2½% consistency and pumped to thickeners where it is increased to 6% consistency. The refining arrangement at that time was as shown in Fig. 4.

Having proved to their satisfaction that the hydrafiners would do the job and save 220 h.p. beside, they set about making the installation permanent.

Tile chests were built along side their existing chests and a quick transfer made with minimum down time. Photo 6 shows the chest at completion, and during the resetting of the thickeners.

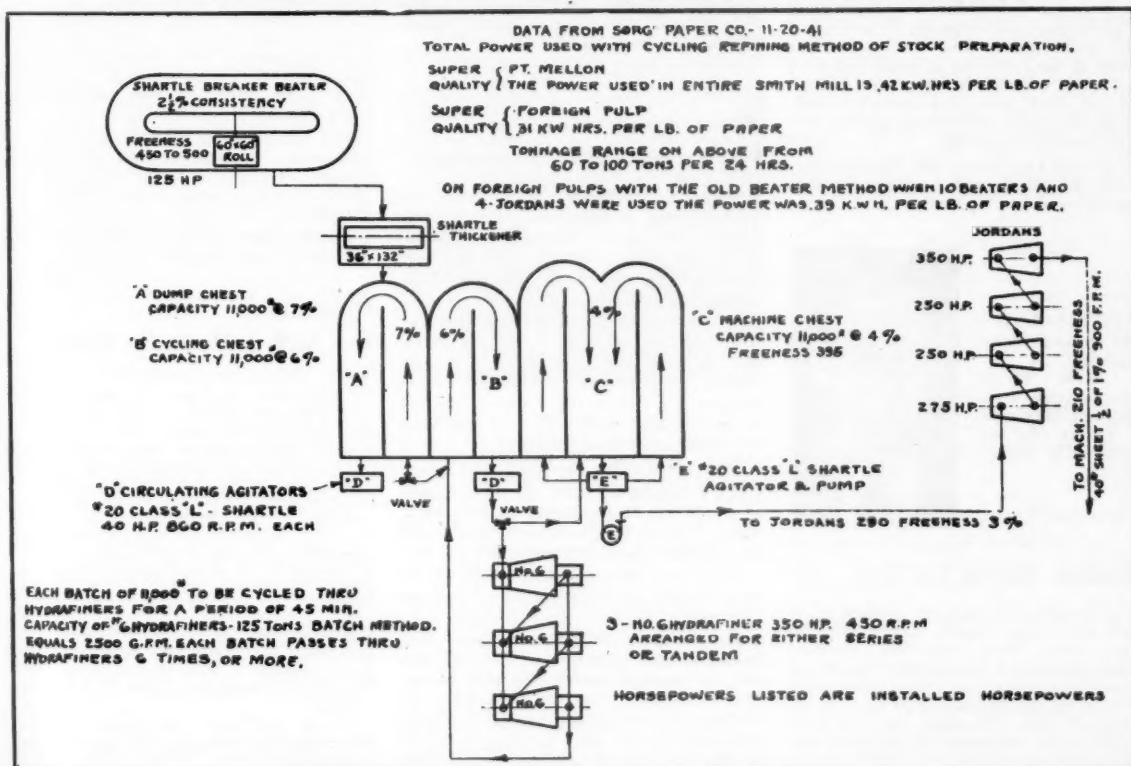
Stock from the breaker beater now enters the thickness as shown in Photo 7, is brought up to 6% and sometimes 7% consistency (Photo 8) and discharged directly to the tile chest below (Photo 9) shown in Figure 5 as chest 'A'.

A Class 5 No. 20 circulating agitator keeps stock in chest 'A' in suspension and, by means of a bottom inlet two way motorized valve, also pumps over to chest 'B.' Chest 'B' is used for cycling of the stock through the hydrafiners which are fed by a No. 20 Class L circulating agitator (Photo 10). Here again a 24-inch motorized rotary valve permits stock to be thrown over to chest 'C.' Incidentally these valves are, so far as is known, the largest rotary valves in use on paper stock.

Hemlock Pulp Required Extra Hydrafiner

● Photo 11 shows the same agitator in

FIG. 5—REFINING SYSTEM FOR SMITH DIVISION OF THE SORG PAPER CO.



front of chest 'B' and piping overhead to the three No. 6 hydrafiners. Originally the ten Horne beaters were replaced by only two No. 6 hydrafiners but with the use of hemlock pulp, additional refining capacity became necessary. This was accomplished by setting an additional unit alongside the previous two as planned. The mill manager today expresses doubt they could have used this type of pulp with their old beater equipment.

Photo 12 shows the three hydrafiners with piping arrangement and bevel gear adjustment from floor above where the handwheels are located close to control board and recording power charts.

Lights on the control board (Photo

13) indicate valve positions, chest levels (from floats in Photo 14) and units actually operating at the time, all of which is recorded at desk (Photo 15) in the Smith mill. The floats actuate Mercoid switches (Photo 16) which in turn indicate conditions on the control board.

The hydrafiners are set to definite power requirements and all three are operated identically. Duplicate runs are thus easily made with assurance that tests will be up to requirements.

Chest 'C' (Photo 14) is kept in suspension by a 20-inch Class L agitator (Photo 17) from whose discharge casing the centrifugal pump takes stock for delivery to the jordan on the paper machine, at a uniform rate.

Today with all grades evaluated by hydrafiner methods, Sorg faces a postwar period with confidence in their ability to make paper with the required characteristics. They control their pulp supply and they know exactly what can be done with it. All operations have been literally "time-studied."

Adding the improvements and expansion projects already completed, now underway, or planned for the immediate future—both at Middleton and Port Mellon—to Sorg's 93-year "know-how" and you are impressed with the belief that the name of Sorg will be seen and heard in the peacetime paper markets ahead.

New Chicago Packaging Club Formed

● The Chicago Packaging Club is a new industry association which has been organized in one of the largest industrial packaging areas in the world.

Its growing membership holds luncheon meetings on the second and fourth Monday of each month at the Builders Club, 228 North La Salle St., Chicago 1, and the Packaging Club makes its permanent headquarters in the same building.

C. Stewart Macnair of C. S. Macnair & Associates is the first chairman of the new organization, and Terry M. Prokop is secretary-treasurer.

This is the second thriving paper industry association to be organized in Chicago during the war period, the other being the Chicago Professional Paper Group, which has been meeting every third Monday, more recently at the Bar Assn.

The new Packaging Club fills a need for a forum for discussion of problems of packaging and shipping in an important trade center and is an outcome partly of the centering of army and navy packaging research in that city. Discussions of army, navy and ordnance packaging, the future of V-boxes, movies, etc., have featured meetings.

The club's governors are Mr. Macnair; Frank H. Biederman, advertising-merchandising dept., Kimberly-Clark Corp.;

EARL M. "MICK-EY" McCOURT, Coordinator of Sales and Production, Consolidated Water Power & Paper Co., and popular citizen of Wisconsin Rapids, Wis., who is now in Washington, D. C., as Consultant to Printing and Publishing Division of Forest Products Bureau of War Production Board.

Harry J. Bettendorf, Fibre Containers; John B. Bucuss, manager, strapping division, Acme Steel Co.; John S. Gorman, Signode Steel Strapping Co.; Frank A. Wilcox, purchasing agent, Kraft Cheese Co., and Don L. Quinn, Don L. Quinn Co.

Rowe Announces Plan For Great Lakes Expansion

● Great Lakes Paper Co., with mills at Fort William in Ontario's Thunder Bay district and head offices in Toronto, announces a program of substantial expansion to be carried out this year.

Hon. Earl Rowe, president of the company, advises PULP & PAPER INDUSTRY that a pulp drier building 80' x 126', a pulp warehouse 85' x 140' and a train shed 41' x 140' are to be constructed, all two stories high. They are to be of reinforced concrete, structural steel and brick construction.

Equipment to be installed is as follows: Dryer building—pulper or beater, 120" Flakt dryer to be provided by Paper Machinery Co.; 120" Layboy, by Hamblet Machine Co., Lawrence, Mass.

Handling, baling and lowering equipment is being supplied by the Matthews Conveyor Co., Port Hope Ont.

For the pulp warehouse a 3-ton overhead cab operated crane 80'-10" span will be supplied by the Herbert Morris Crane Co., Ltd., Niagara Falls, Ont.

Conveying equipment from the pulp warehouse to the dock is being provided by Williams & Wilson, Ltd., Montreal.



B. T. McBain Dies At Portland Home

● B. T. McBain, 65, purchasing agent for Portland General Electric Co. and for many years a pulp and paper mill consultant, died March 2 at his Portland, Ore., home.

He was resident manager of the old Willamette Pulp & Paper Co. at West Linn, Ore., superintendent at Lebanon, Ore., and one time manager of Nekeosa-Edwards Paper Co., Port Edwards, Wis. In connection with the current day development of alcohol plants in connection with some sulphite pulp mills in North America, Mr. McBain recently recalled that probably the first experiments on the continent along this line were made when he was at West Linn in about 1914.

An alcohol still was installed there and made about 200 gallons per day. In contrast with present government interest in helping to develop this pulp mill by-product, Mr. McBain recalled that Uncle Sam's "revenooers" made the West Linn operation very difficult 40 years ago.

His interest in by-products and greater utilization of wood carried on to the present day. He was secretary-treasurer of the recently formed Forestry Research Foundation of Oregon.

He was born in Marysville, Calif. His widow and two daughters survive.

Progress In Plans For Idaho, Montana Mills

● Incorporation articles for the Idaho-Montana Pulp & Paper Co., described as a \$1,500,000 concern, have now been filed in both of those states. For some months, the organizers have been planning unbleached sulphite mills at Polson, Mont., and Couer d'Alene, Idaho.

The Montana firm, with headquarters in Missoula, listed these directors: John Campbell and Lyle Wright, Missoula; W. F. Emory and S. C. DeMers, Polson; J. J. Reese, Columbia Falls; G. M. Moss, Whitefish, and J. J. Burg, Kalispell.

The Idaho firm listed Messrs. Campbell, Emory, DeMers and Reese, and also A. E. Douglas, St. Maries, Idaho, and W. T. McNaughton, Couer d'Alene attorney.

L. A. DeGuere, Wisconsin Rapids, Wis., engineer is engaged in planning the operations.

PETE SINCLAIR, who moved from Carthage, N. Y., to West Linn, Ore., became Asst. Resident Manager of Crown Zellerbach mill there.



Sinclair, Harris Go East

● Peter Sinclair, assistant resident manager, and Jesse Harris, paper mill superintendent, West Linn, Ore., division, Crown Zellerbach Corp., left Feb. 24 on an extended eastern tour which took them to mills in the Middle West and to the National Paper Products mill in Carthage, N. Y. (formerly managed by Mr. Sinclair).

Three-Stage Bleach Plant Equipment Being Rushed For Weyerhaeuser Timber Co. Mill at Everett

● A modern three-stage bleach plant is scheduled to go into operation this summer at the Everett, Wash., mill of the Pulp Division, Weyerhaeuser Timber Co., as the result of additional installations costing around half a million dollars.

At the Office of the Chief of Ordnance, War Department, Washington, D. C., PULP & PAPER INDUSTRY was advised the Everett mill will change over completely from manufacture of paper grades of sulphite pulp to nitrating pulp by the army for firing all large and medium caliber artillery.

The changeover will require about 55 additional employees and the construction of three additions: (1) a third stage for the bleach plant, (2) an addition to the screen room and (3) two more sand filters for the water filtering plant. There will be changes on the pulp machine and other alterations. Total employment at the mill will be raised to about 330 men and women.

The driving of piling and foundations for additions were being completed in April and Russell J. LeRoux, manager of the mill, said that with the fullest cooperation being given by the government and equipment companies, he is confident the army's deadline for the new operation—July 1—will be met. There is no doubt that this is going to take some real hustling all along the line from Washington, D. C., to the equipment plants.

The nitrating pulp contract is let by San Francisco ordnance district after approval by the Office of the Field Director of Ammunition Plants, 3629 Lindell Blvd., St. Louis 8, Mo. This is the second Everett mill to go onto full-time nitrating pulp production and it becomes the fourth sulphite mill in Washington state devoted to this production. With a fifth expected to be added, this will mean, according to Washington officials, that Washington state mills will be producing about 85% of the army's requirements for nitrating wood pulp. The army public relations previously authorized the announcement that the other sulphite mill of the Pulp Division of Weyerhaeuser Timber Co., in Longview, was on full production of this grade of pulp.

A three-story addition to the bleach plant, 40x80 ft.; a 61x72 ft. screen plant addition and increase of the water filtering capacity by 6,000,000 gallons a day to about 26,000,000 gallons are under way.

The Everett Weyerhaeuser mill had two stages of bleaching—chlorination and high density. A second high density stage is being added.

Otto C. Schoenwerk, 3240 Lake Shore Dr., Chicago, is consulting engineer for the project, assisted by G. F. Alcorn, plant engineer.

Construction contractors are Howard Wright Construction Co., and the structural steel is the product of Isaacson Iron Works.

Oliver United Filters, Inc., of New York and Oakland, Calif., is supplying an 8x12-foot high density thickener. Improved Paper Machinery Corp. is supplying screens.

Caustic cooker agitators, Warren pumps, and Western Gear speed reducers are being furnished through James

Brinkley, 417 Ninth Ave. So., Seattle. Stebbins Engineering Corp., Seattle, is lining all tanks. King Bros., Portland, Ore., is supplying caustic cookers; Alaskan Copper Works, Seattle, stainless piping and fittings; Service Bronze & Brass Works, Portland, bronze fittings; Lamb Grays Harbor Co., reel and roll finishing equipment and deckers; Bingham Pump Co., pumps and agitating equipment; and Grinnell Co. and Palmer Supply Co., Seattle, other general hardware.

Judge Rules Indians May Have Exclusive Right to Alaska Pulp Timber

● While the U. S. Forest Service's attempts to interest private capital in starting up a pulp and paper industry in Alaska have apparently been slowed up until after the war, the Department of the Interior-inspired Indian claims to the best pulp timber in the territory have been kept alive by an examiner's decision.

Meanwhile Crown Zellerbach Corp., through Vice President Albert Bankus, has declared its continued interest in the timber only "as a potential future source of supply." The Forest Service had

The Cameron Machine Co. is supplying a rewinder, as it is required to ship nitrating pulp in rolls.

Northwest Filter Co. (Wm. Gibson), Seattle, provides additional filter plant equipment.

Control equipment and panels are being furnished by Westinghouse Electric & Manuf. Co. Quite a number of motors ranging up to 300 hp. are being furnished by General Electric and Westinghouse.

hoped to obtain bids this year on a 14-million cord timber stand in the Ketchikan area.

During March, Judge Richard H. Hanna, Interior Department examiner, who had conducted exhaustive hearings, decided that aboriginal rights of the Haida and Tlingit Indians of Southeast Alaska may exist to some of the uplands claimed by them. Judge Hanna recommended to Secretary Ickes that Congress be asked to authorize an extensive survey of the entire question. Mr. Ickes may or may not be guided by this recommendation.

The examiner proposed that such a survey seek to determine if the Indians have been damaged; and the amount of the damage, should Congress decide to extinguish aboriginal rights of Indians in Alaska.

There was nothing in Judge Hanna's recommendations supporting the Indian's request that exclusive use and occupancy of enormous areas of landing and water in Alaska be reserved to them.

So far as the use of the waters and the rights of fishery were concerned, Judge Hanna found that the Indians had failed to prove that they ever had enjoyed exclusive use. This part of the decision was a definite defeat for them.



CHARLES M. BARR, of Marshall & Barr, Lloyd Bldg., Seattle, flew to Toronto, March 27, to join temporarily the engineering staff for construction of the 250-ton bleached kraft pulp mill of Marathon Paper Mills of Canada at Marathon (Peninsula), Ont. His headquarters: Canada Permanent Bldg., Toronto.

NILES ANDERSON, Vice Pres. and Gen. Mgr. of the company, said Mr. Barr would be in Ontario 3 or 4 months. Mr. Barr was recently engaged by British Columbia Pulp & Paper Co., specializing on operation efficiency. He previously was engaged in building units of the St. Regis Kraft Division, Tacoma, Wash., and Puget Sound Pulp & Timber Co.

TAPPI to Meet in Maine

● On the basis that the war mobilization office's request to abandon conventions does not apply to small, sectional meetings, the Maine-New Hampshire group of TAPPI plans to meet at the Elmwood Hotel, Waterville, Maine, May 11-12 (Fri. and Sat.).

E. E. Sawyer, chief chemist, Keyes Fibre Co., and C. M. Meyers, Hollingsworth & Whitney Co., are in charge of arrangements.

New York Meeting Planned

● Having cancelled its annual convention, the American Pulp & Paper Mill Supts. Assn. will hold a trustees meeting and a business meeting for members June 8-9, Commodore Hotel, New York.

Ladies' Night in Kalamazoo

● The Michigan division of the Superintendents Assn. will hold its annual Ladies Night dinner-dance Sat., May 5, at the Hotel Park American, Kalamazoo, Mich.



CROWN ZELLERBACH BUYS VAST TIMBERLAND IN OREGON

Will Be Transformed From Sawtimber to Pulpwood Area
New Economic Values Open for 47,000-Acre Forest

TO BALANCE better its tree farm holdings, Crown Zellerbach Corp. has purchased 47,000 acres of forest lands in Northwest Oregon from the Clark & Wilson Lumber Co.

Typical of a new trend in the Far West — already dramatically demonstrated in other big timber deals of the past year — this transaction involves a vast acreage which has passed its peak of usefulness in supplying saw timber. But, instead of laying waste lands in its wake as has been the history of other generations in North, South, East and West of this continent, already young trees of pulpwood species are growing on this land and more will be planted.

The Clark & Wilson Co. of Portland, Ore., one of the important lumber operators of the west over many years, will liquidate all of its holdings by December, 1947.

But, already, this great timber tract is being prepared as a source of supply for Crown-Zellerbach pulp

and paper mills and, in the new mode of woods operation in the west — bringing out small and what used to be waste wood — it is likely eventually to give employment to even greater numbers than did Clark & Wilson.

The price of the transaction was not announced. Don Denman, Seattle, vice president in charge of Crown Zellerbach Corp., timber and logging, said that 4,000 acres of old growth Douglas fir scaling about 80,000,000 b. f. was included which will be logged by private contractors and allotted to firms which have been buying previously from Clark & Wilson in keeping with war requirements as set up by Fred Brundage, western log and lumber administrator for the War Production Board. These logs will be hauled 30 miles to the Columbia River log dump near Scappoose, Ore.

Crown Zellerbach Corp. plans to develop the new acreage into an up-to-date tree farm, operating on a sustained yield basis with cutting

confined to normal growth. (Mr. Denman outlined this policy at the Camas Paper School graduation—see page 30).

The area lends itself well to tree farm purposes because of the varying ages of second growth now restocking from natural sources. Re-seeding, where necessary, will favor the pulp species. There are few of these areas and the lands are said to be in excellent shape for tree farming because of the Clark & Wilson clean logging and snag falling practices. As the area is a normal Douglas fir producing area, with heavy stands of pulp species, future policy will be to use whatever possible for pulping and hold lumber species for lumber.

Young growth stands on some 6,000 acres are from thirty to sixty years of age. Systematic thinning of these trees to accelerate growth will be undertaken as soon as manpower is available after the war. The thinnings will be converted to pulp and paper at West Linn and

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TWENTY-TO-50 YEAR OLD TREES in extensive timberlands which have passed from Clark & Wilson Lumber Co. to Crown Zellerbach Corp. are shown in the above panoramic view. The occasional snags of old trees shown in this picture can be compared in size with this new growth. The new growth already is well above most of the snags.

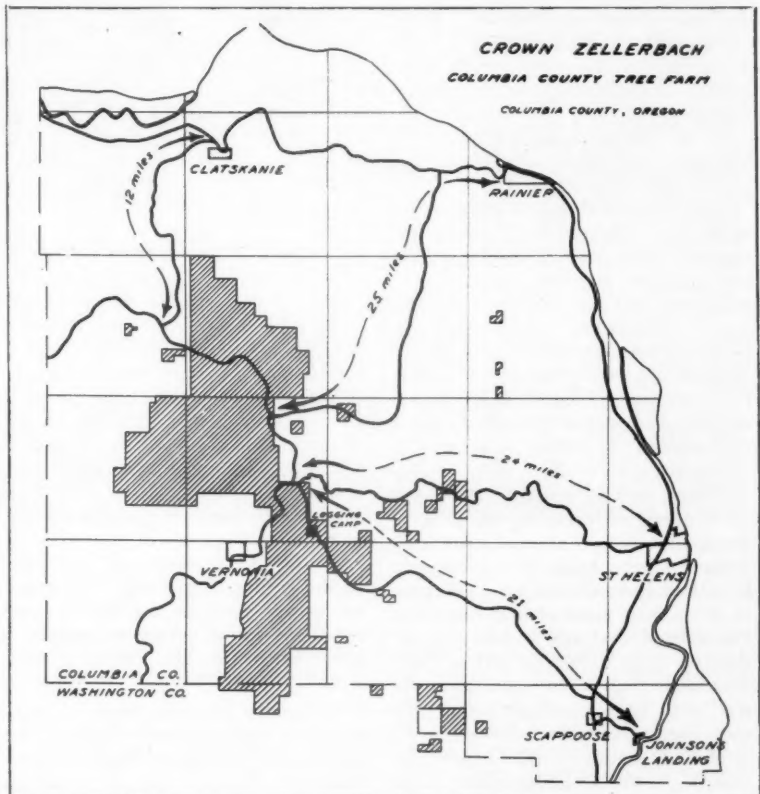
SHADED AREAS (right) SHOW 47,000 acres of timberlands purchased by Crown Zellerbach Corp. from Clark & Wilson Lumber Co. in northwest Oregon. The Columbia River outlines the right side of the map. Rainier, St. Helens and Scappoose are on the river. Some small tracts owned by other individuals or companies are in the shaded area

Camas mills. This calls for employment of small units throughout the tract which will deliver wood to a central shipping point. Employment for residents of the region is expected, with a probable increase above that at present.

Intensive Fire Protection

● Twenty thousand acres now in the process of developing second growth from one to 17 years in age will be intensively protected from fire. This protection will extend to areas where natural restocking or hand plantings are returning on areas subjected to logging operations in more recent years. Although fire hazard has been minimized by snag falling practices of former owners, roads will be opened immediately by way of added insurance. Some two miles of old logging railroad grades and spurs will be utilized as rapidly as manpower is available for conversion to fire roads. Thinning

The average here shown—30 years old—is about 12 in. in diameter (breast high) and about 60 ft. high. Those 20 years old are 40 ft. high and 8 to 10 in. (DBH). When 50 years old, they would average 18 in. (DBH) and 130 ft. high. This photograph covers the bulk of 20-50 year trees in purchased area, about 6,000 acres of the total of 27,000 acres.





operations and tree plantings will likewise proceed as soon as practicable. About 5,000 acres are now ready for thinning.

The added acreage brings to 365,000 the area dedicated to tree farms by Crown Zellerbach Corp., which is planning a sustained yield growth capable of furnishing a perpetual supply of pulp timber to its mills at Port Angeles, Port Townsend, and Camas, Wash., and West Linn and Lebanon, Ore. The seven tree farms to supply the five mills are:

FOURTH YEAR GRADUATES, CROWN WILLAMETTE PAPER SCHOOL, '45: (Left to right) MILES CADY, JOE BRAZNEY, DON KNAPP, DELMAR GEHLEN, HARRY GLENN, GEORGE GOOD and LEWIS RICHARDSON. Messrs. Cady and Brazney won trips to Northwest mills for scholarships.

Cathlamet, Pacific County, and Neah Bay Tree Farms in Washington; Clatsop, Tahkenitch, Tillamook and the new Columbia County Tree Farms in Oregon.

The newly acquired lands lie west of St. Helens and Scappoose, a n d north, east and south of Vernonia, Ore.

The present planting program of

the company, unattainable during the war because of the manpower shortage, requires restocking of 1,000 to 1,500 acres annually with about one million trees. Because only one-fourth of this program has been fulfilled, augmented plantings will be carried on after the war until the deficiency has been offset. The Nisqually Nursery has been furnishing trees.

Crown Zellerbach's Tree-for-Tree Reforestation Policy Is Revealed at Paper School Graduation

THE Crown Willamette Paper School graduation this year was made a memorable event for the entire industry by serving as the stage for one of the most forthright declarations on forestry policy ever made by a wood-utilizing industry.

Here's the statement of policy—a postwar pledge by one of the biggest operators in the field:

Crown Zellerbach Corp. will never use trees in its manufacturing processes at any faster rate than they can be regrown, even if it is necessary to cut down on pulp and paper production. However, this latter alternative is not anticipated. Instead, ten to 12 trees will be planted, if necessary, for each one felled on the company's 334,000 acres of timberlands in order to achieve a "true sustained yield."

There was no mincing of words or hedging of meaning as Don S. Denman, vice president, Crown Zellerbach Corp., made this pledge in behalf of himself and his colleagues in the management of that company. He warned that any wood-using industries that "expect to stay in business more than a few years after the war" will have to adopt more efficient methods of manufacturing.

Mr. Denman, who heads his company's timber department, made

VICE PRES. D. S. DENMAN, in charge **T i m b e r** and **Log Dept.**—**"Crown Zellerbach Corp. will grow a tree for every one cut."**



his address just before he presented diplomas to 77 graduates of the school at the annual ceremonies in Nora Self Hall, Camas, Wash., on the evening of March 15.

Marshall Dana, editor of the editorial page of the Oregon Journal of Portland, Ore. (his father was cousin of the famous New York Sun editor, Charles A. Dana, who wrote the classic Santa Claus editorials over a half century ago), made the inspirational speech of the evening. He glorified research as "the door to the future." He said "the greatest power pool in the world" and extensive forest resources assured a great future for the Pacific Northwest.

He praised cooperation of management and employees, noting that the Crown Willamette Paper School, founded 12 years ago, "was not in-

spired from overhead, but was proposed by employees, who found a sympathetic and cooperative management."

Denman's Address

● Contrasting with the rhetorical address by Mr. Dana, the speech of Mr. Denman was really no speech at all—just a man-to-man talk. But what he had to say, in quiet conversational tone, was so full of significance for the future, that it held his audience in rapt attention.

"Some sawmills will fold up, but in their places will be different types of wood utilizing plants," he said. "Instead of wasting 50 per cent of the wood, which we can't avoid today because of manpower shortages, we will take out of the forests all of the wood. There will be use made of what is now sawmill waste. Hydraulic log barkers will cut down waste.

"But don't expect all this to happen overnight. It will take time. There will be a different period right after the war. But the ingenuity of the men on the job will play an important part in bringing about the change.

"The whole scheme of timber removal and use is going through a revolution. It will be completed in

a short period of time after the war."

J. E. Hanny, resident manager at Camas, welcomed students and guests and told of difficulties of keeping the school in operation in wartime.

R. A. McDonald, of San Francisco, executive vice president said waste paper collections of 500,000 tons a month were keeping the industry alive. He prophesied "five bright years at least" ahead for the industry.

A. G. Natwick, dean of the school, presented honor awards to outstanding students and discussed the benefits of education to the industry and nation.

Messages of congratulations were read from J. D. Zellerbach, president, and Albert Bankus, vice president in charge of manufacturing.

William D. Welsh, executive assistant, was master of ceremonies. A full hour of high class entertainment by a radio troupe from Portland preceded the speeches.

Honor Students

● Top paper school honors went to Miles Cady of the Camas mill and second place to Joseph Brazney of the Crown Zellerbach mill of West Linn, Ore., both of the fourth year class. Their prize was an all-expense one-week trip to other Pacific Northwest mills. Donald Knapp of Camas was accorded honorable mention in the fourth year class.

In other classes first and second place winners were given books on papermaking as prizes and all winners of honorable mentions were presented with paid-up subscriptions to PULP & PAPER INDUSTRY.

The other winners, as announced by Mr. Natwick:

First year—Charles Zorn, first; Homer MacArthur, second; Melvin Glickman and Harold Johnson, honorable mentions.

Second year—Edward Franklin, first; Harold Coe, second; Hattie Jackson and Richard Cavitt, honorable mentions.

Third year—Gordon Nast, first; Fred Maffei, second; Joel Edwards and Peter Wilkie, honorable mentions.

In addition to the above named, those awarded class diplomas follow:

Fourth year—Delmar Gehlen, Harry Glenn, George Good, Lewis Richardson.

Third year—Thomas Bennett, Halbert Hinze, Gedhard Jaffe, Carl Loron, William McGill, F. M. Mighells, Jack Rivenness (of Pacific Coast Supply Co.), Roy Trutton.

Second year—Malka Bestel, Lucile Borigo, Leonard Cosser, Myrrha Cosser, Robert Dexter, Lawrence Dungan, Sr., Girard Eck, Glenn Gunderson, F. T. Holdsworth, Rufina Hughes, Robert Kolberg, Jack Krank, Mabel Lindgren, Geneva Persons, Jim Rook, Joe Stewart, Henry St. Lawrence and Oscar Wheeler.

First year—E. R. Aslin, James R. Bartlett, James Barton, Culbert Blackmon, Mildred Blake, Harry Bowers, Mary Bowers, Constance Breitenbauch, T. E. Brown, Robert Carter, John Corley, Walter Coulson, Donald Cross, Wm. Decamp, Myron E. Doty, John Dougherty,



CAMAS CLASSES (left to right by rows)—

THIRD YEAR—Front row: Joel Edwards, Gordon Nast, F. M. Mighells, Gerhard Jaffe and Thomas Bennett. Back row: Peter Wilkie, Reginald Haight, Roy Trutton, Jack Rivenness, Wm. McGill, Fred Maffei, Carl Loron and Halbert O. Hinze.

SECOND YEAR—Front row: Prof. G. H. Gallaway, Lucile Borigo, Malka Bestel, Hattie Jackson, Geneva Persons, Rufina Hughes, Mabel Lindgren, Girard Eck. Back row: Jack Krank, Robert Kolberg, Oscar Wheeler, Joe Stewart, Henry St. Lawrence, Harold Coe, Lawrence Dungan, Sr., Glenn Gunderson, Richard Cavitt, F. T. Holdsworth, Edward Franklin, and Jim Rook.

FIRST YEAR—Front row: Ralph Hallin, Robert Carter, Melville Glickman, Charles Zorn, Norma Simmons, E. R. Aslin, Constance Breitenbauch, F. Yoder, Betty Wold, H. MacArthur, J. M. Hewitt, J. Barton, Mildred Blake, C. Blackmon, L. Raicot, W. L. Coulson, C. F. Everett, G. Kendall. Back row: J. Dougherty, J. Garner, R. Vander Linden, G. Quilici, J. Corley, E. McGill, C. Wilken, W. Olsen, T. E. Brown, Mary Bowers, H. Bowers, D. Cross, H. Johnson, R. Hassell, R. Rieman, W. Decamp, M. E. Doty and Prof. W. C. Jacoby.



AROUND HEAD TABLE AT CAMAS MARCH 15:

Top row (left to right): VERA BERNEY, Asst. to Personnel Spvrs.; MRS. AND MR. MARSHALL DANA; BILLY WELSH, Toastmaster, and R. A. McDONALD, Executive Vice President.

Lower row (left to right): J. E. HANNY, Res. Mgr.; FRANK N. YOUNGMAN, Vice Pres.; G. W. CHARTERS, Asst. Res. Mgr.; CECIL DILLING, Western Waxed Paper Co.; O. T. DEFIEUX, Supt., Steam Plant; A. S. HAMMOND, Western Waxed Paper Co.; G. H. GALLAWAY, Tech. Supvrs.; CLARENCE ENGHOUSE, Asst. Res. Mgr., West Linn mill; W. R. BARBER, Director, Central Tech. Dept., and A. G. NATWICK, Asst. Res. Mgr., Camas, and Dean of School.

Charles F. Everett, John Garner, Ralph Hallin, Marvel Hassel, Jean M. Hewitt, Glenn Kendall, Eugene McGill, Walter Olsen, Geno Quilici, Leo Racicot, Roland Rieman, Norma Simmons, Raymond Vander Linden, Conrad Wilken, Betty Wold, Fred Yoder.

There were 102 registered in the school

this past year. Of the 77 receiving diplomas, 13 were women and girls and the ages of all ranged from 16 to 63. Fourteen traveled a total of 4,390 miles between West Linn and Camas to attend.

Regents are Vice President Bankus, Mr. Hanny and C. E. Bruner, resident manager at West Linn.

Besides Dean Natwick, the faculty are G. H. Galloway, technical supvrs., Camas, school principal and professor of second year class; C. A. Enghouse, asst. res. mgr., West Linn, vice principal; W. C. Jacoby, asst. technical supvrs., Camas, professor of first year class; George D. Bailey, engineer, Camas, professor of third year class; Reginald Haight, personnel dept., Camas, asst. professor of fourth year, and C. A. Anderson, wood technologist, Camas, registrar.

Advisors are Paul Millard, finishing room supt.; Gus Ostenson, paper mill supt., and F. R. Sievers, groundwood foreman, all of Camas; and E. H. Nunn, technical supvrs., West Linn.

Among others introduced at the dinner were W. R. Barber, director of the Central Technical Dept.; G. W. Charters, asst. res. mgr., Camas; J. F. Frum, asst. vice president; Axel Brandstrom, chief forester; Mr. Vera Berney, personnel; Cecil L. Dilling, manager, Western Waxed Paper Co., Portland; A. S. Hammond, manager, gumming division, Western Waxed Paper Co.; and the following who gave lectures at the school—W. N. Kelly, pulp mill mgr., Weyerhaeuser Timber Co., Longview, Wash.; H. H. Richmond, chief engineer, Electric Steel Foundry Co.; P. R. Hines and Carl Walker, engineers, Portland; E. P. Stamm, logging manager, Crown Zellerbach Corp., Portland, and Otto Hartwig, industrial relations and safety director, Crown Zellerbach Corp., Portland.

Ocean Falls Paper School Aids Management and Employees

By R. Paradis

● The Pulp and Paper School at Ocean Falls, B. C., is conducted as an aid to vocational education of employees of Pacific Mills, Ltd.

To the best of our knowledge there are only three other schools on this continent operated by pulp and paper companies. We believe our school is the oldest. It had its beginning in 1925 when the B. C. Department of Education and Pacific Mills jointly sponsored the project.

Since the school's inception many innovations and improvements have been made. At present the course is designed to meet needs of employees whose experience ranges from many years to new employees who have never worked in a mill before. A small nominal fee is charged.

Classes are held evenings twice a week, from mid-October to the end of February. The course is equally divided between theoretical and practical aspects of pulp and paper making. A two-hour lecture is given in the high school each Tuesday night and on each Thursday two hours are spent in the part of the plant covered by that week's lecture. The course comprises 64 hours of instruction.

Lectures are given by a qualified member of the mill's technical department and mill trips are conducted by the foremen of departments. These foremen give many practical up-to-the minute facts, not covered in the lectures.

We are fortunate in having a plant that manufactures groundwood, kraft, bleached and unbleached sulphite pulps and produces newsprint and scores of specialty paper grades. This enables us to show students most of the equipment



AT CAMAS PAPER SCHOOL GRADUATION:

Upper left—FATHER AND DAUGHTER IN SCHOOL TOGETHER, JAMES BARTON, 60, Napkin Dept., and his attractive daughter, BETTY WOLD, Office Telephone Operator, were both in 1st Year. Her husband, LEONARD WOLD, is in U. S. First Army in Germany.

Upper right—MRS. KENNETH WEIDMAN, wife of veteran Camas machine tender. She was Chief Cook for the affair. She and other Camas women volunteers have made several wartime dinner affairs possible in that mill city.

Lower left—H. H. RICHMOND, Chief Engineer, Electric Steel Foundry Co., and W. N. KELLY, Mgr., Longview, Wash., pulp mill, Weyerhaeuser Timber Co., who each year give their time to lecture at the School.

Lower right—FATHER AND SON COMBINATION—WILLIAM MCGILL and his 16-year-old son, EUGENE. The father, Mill Fire Dept. employe, finished 3rd year in school. His son, in 1st year, wants to be an electrical engineer.

Bear Brand Chemicals for Western Paper Industry

The dependability of Bear Brand Chemicals and their ready availability make them the choice of many of the West Coast's largest paper mills.



Ammonia Chlorine

Caustic Soda

Sulphur Dioxide

Zinc Hydrosulphite



DOW

CHEMICALS INDISPENSABLE
TO INDUSTRY AND VICTORY

GREAT WESTERN DIVISION

THE DOW CHEMICAL COMPANY

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and processes covered in the lectures and minimizes any tendency towards placing too much stress on the theory.

The course begins with a brief outline of the history of pulp and paper making, then considers the subject of logging and follows logically through with a study of each department comprising our plant. The last lecture is given by Resident Manager R. H. R. Young, and covers problems of mill management.

The curriculum allows inclusion of discussions by any qualified experts who happen to be visiting the community. Colored motion pictures are shown.

This year a start has been made on writing a text-book that will cover operations in our own organization. The text-book is still in the form of mimeographed sheets, given to students after each lecture. After two or three years



R. PARADIS,
Chemist, Pacific
Mills Ltd., Ocean
Falls, B. C., who
describes his
mill's paper
school in this ar-
ticle.

in this form it is planned to revise these write-ups and present them in text-book form.

examination composed of 100-200 questions is given. Grades are kept confidential. If a student makes a grade he believes to be satisfactory he may have it certified and entered on his employment record card.

Any company wishing to start a similar class may ask what beneficial results have been obtained. That employees consider the course beneficial is shown by 19 years of continual operation and a present average yearly enrollment of 20-30 students. When advancement is open to an employee, and other things are equal, the opportunity is often given to the employee who has made good grades in the school. The company, on the other hand, gains from the course a group of more alert and better informed employees.

McMillan's "Water Doctor" Wins Canadian Engineering Contest

● A Dominion-wide engineering 'gadgets' contest sponsored by the Canadian Pulp & Paper Assn., has been won by William McMillan, beater room foreman, Powell River Co., Powell River, B. C. He was awarded first prize of \$50 by the engineering committee of the Technical Section CPPA.

Mr. McMillan's gadget, illustrated on this page, has been successfully used at Powell River for some time. The design covers introduction of a "Water Doctor" for removing pulp from the wire cylinders of Oliver Washers and other equipment.

Originally a vacuum discharger was used consisting of a suction fan, a scroll conveyor and a doctor board. This equipment was enclosed in a sealed housing. This arrangement was found to be not too satisfactory, especially when handling groundwork stock, for the following reasons:

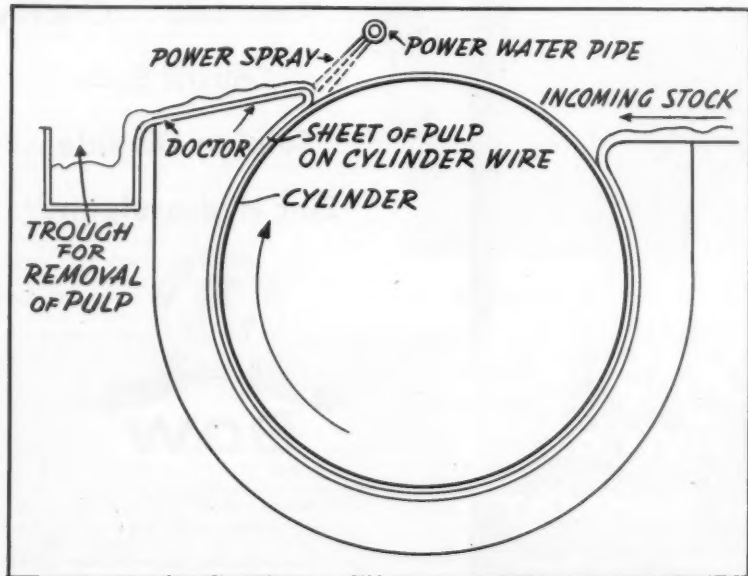
1. The stock was carried up into the fan with the resultant kick out of the fan motor.

2. The doctor board had to be so thin to get under the sheet of pulp that the board often broke with resulting damage to the wire on cylinder.



**WILLIAM Mc-
MILLAN**, Beater
Room Foreman,
Powell River Co.,
Powell River, B.
C., the prize win-
ner.

In Mr. McMillan's gadget, a high pressure water shower is used to take the cake of pulp off cylinder and throw same onto a doctor board. The shower rolls the sheet of pulp over onto the doctor, whence it is washed into an open trough to the discharge.



Vice President Miller Of West Virginia P&P Dies

● John Robinson Miller, director and vice president in charge of sales, West Virginia Pulp & Paper Co., died March 15 at Garden City, N. Y., after a long illness.

He had served 49 years with the company, working vacations in the Piedmont, West Va., mill when his father was superintendent there, and later starting as an office boy in New York. He was promoted to sample clerk, salesman, Chicago office manager at the age of 29 and in 1918 returned east as assistant to the president.

Miller's Son Goes East

● Douglas D. Miller, San Francisco, Pacific Coast manager of West Virginia Pulp & Paper Co., was called east because of the death last month of his father, John R. Miller, vice president of the company.

TAPPI Wants Volume I Of Pacific Pulp & Paper Industry

● WANTED—A complete set of Volume I of PULP & PAPER INDUSTRY (called Pacific Pulp & Paper Industry then) to complete the bound volumes of the magazine at TAPPI headquarters in New York City.

Recently R. G. Macdonald, secretary-manager, TAPPI, 122 East 42nd St., New York, sent out the association's copies of this journal to be permanently bound. The bound volumes returned minus Volume I. There are eleven issues in Volume I, because the journal began with the February, 1927, issue. If you have individual copies Mr. Macdonald would like to hear from you.

Geo. S. Macdonald Dies

● George Saxe Macdonald, president of the Lockwood Trade Journal Co., publisher of Paper Trade Journal, Lockwood's Directory of the Paper and Allied Trades, and Tobacco, a weekly devoted to manufacturing of tobacco, died after a lingering illness March 18 at his home 79 Sutton Manor, New Rochelle, N. Y. He was 78.

Born in Whitestone, Long Island, he entered the publishing business in 1905. A son and daughter survive. He was a widower.



The Dorrco Slaker does the work of *both* slaker and classifier. It is a single, self-contained unit. Operation is simple and safe, and overall installation costs are lower than for usual two-unit layouts. Further economies occur in operation and maintenance.

INSTALLATION ECONOMY The Dorrco Slaker is complete, ready to bolt to the floor. No foundations are required, as with other type slakers; there is no extra expense for erecting connecting launders between slaker and classifier because the Dorrco Slaker is all one unit. All protective hoods and covers are provided. A competent Dorr field engineer oversees Dorrco Slaker installations.

OPERATING EFFICIENCY Adequate provision is made in the classifier section of the Dorrco Slaker for removing unusual quantities of grit. Fine separations are assured by the Dorrco Slaker's ample pool area and volume.

LOW MAINTENANCE COST Tank liners of

the Dorrco Slaker are durable white iron. Long life even under severe abrasive and corrosive conditions is therefore assured before replacements become necessary—and *Dorrco tank liners are replaceable*. When replacements are necessary, they are less expensive than with units which require complete new tanks or drums. Another low-maintenance feature of the Dorrco Slaker is the complete absence of submerged bearings exposed to caustic solutions and grit.

DORRCO Lime Slakers are made in six standard sizes, with capacities up to 200 tons of CaO per 24 hours.



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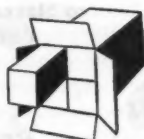
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There are over 50 different emulsions in the Paracol series—each designed to answer effectively and economically specific types of papermaking problems.

Because of their wide range of properties, the Paracol emulsions permit virtually "tailor-made" selection. Choice of the correct Paracol is determined by many factors—involving where and how applied,

and effect desired in the finished sheet.

Your PMC technical representative knows these many factors intimately—through our more than 15 years experience in making emulsions and applying them to papermaking problems. For further information on the use of Paracol emulsions in your operations, use the convenient coupon below.



WATERPROOF ★ GREASE RESISTANT ★ INK REPELLENT ★ TRANSLUCENT ★ BLOOD RESISTANT

Scores of paper mills throughout the country are using to their advantage the research knowledge and technical training of Hercules representatives. This helpful service is at your disposal for all your important papermaking problems.


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PI-43

WHAT ABOUT M-387?

**This advertisement from last year
takes on added significance under
today's restrictions on rosin size.
Let us help you apply the Paracols
as extenders. Write, wire, or phone!**

New Lube Oil Paper Containers Are Here to Stay

● Of far-reaching influence in the oil industry—and possibly in a segment of the food industries—and meaning new business in the pulp and paper field, is a recent development whereby lubricating oil can be merchandised in quart paper containers.

In 1940 alone, more than 450,000,000 gallons of lubricating oil were consumed in this country. Now lube oil can be paper packaged, by means of a newly developed machine, at the rate of 9,000,000 quart containers annually on a single unit working 300 eight-hour days a year at 90 percent capacity.

Perfection of high-speed packaging on these new containers, it is claimed, breaks the wartime bottleneck of metal shortages, for the container is made entirely from non-critical materials, the chipboard used being exempted from the government's limitation order.

The board has been furnished by General Container Corp., the Continental Paper Co., Ridgefield, N. J.; McEwan Bros., Inc., Whippany, N. J., and other east coast mills. The oil-proof liner is a product of a parchment paper company, as is the label used on the pioneer contain-

ers test marked by the Socony Vacuum Oil Co. in the Southeastern states. More than 4,500,000 quarts have been so marketed in that area by Socony, and it reports "the preference for the all-paper container greatly exceeded our expectations."

The container under discussion was envisaged 12 years ago when J. K. M. Harrison began experiments. His patents were obtained by Socony-Vacuum in 1941 and further developments were made. Early in 1943 the General Container Corp. acquired the license and re-license rights. The problem of attaining high speed production remained, and ten months ago General Container took this problem to Package Machinery Co., Springfield, Mass. Their engineers have perfected equipment which will turn out 70 filled quart containers per minute. A. E. Esser and Edward R. Eichner, Socony engineers, New York, call the unit an outstanding example of automatic synchronized machine design and say that the all-paper container is the answer to metal container shortages.

The equipment will be available to other oil companies. A number of engineers of major petroleum

companies throughout the U. S. have watched the packaging in operation and it is expected that this method of lube oil distribution at the service station will be in common use after the war, even when metal is again available.

The container is composed entirely of chipboard, newsboard for the ends, and liner. It is waterproofed on the outside and the liner creates an oil-proof interior. A combination opener and pouring spout is inserted by the service station operator in the same manner as he handled pre-war metal containers. The \$4 to \$6 normally paid by the garagemen for the disposal of used tins is eliminated. In some localities the used paper containers can be sold as particularly inflammable kindling.

The high speed packaging machine is set up in the refinery, with standard paper working equipment to complete the process from fabricating the container to filling and sealing. The paper working equipment takes ordinary board paper in roll form and, in combination with adhesives, winds it spirally into a cylinder open at each end.

At its Bristol laboratories General Container is making trial packages



OIL ON HIGH SPEED ASSEMBLY LINE—70 quart paper containers of lube oil are packaged every minute on this new machine. Built by Package Machinery Co., Springfield, Mass., for General Container Corp. of New York, it is now made available to the oil industry as a standard product. Girl operator at extreme left feeds bottoming discs into first of three units, which seals bottom to paperboard cylinder. Girl in center repeats process for closing unit. Between the two is the filling unit. Inspecting containers as they roll from the assembly line of 16-foot long, six-foot high machine, powered by nine motors, are Norman Lyon (extreme right), Package Machinery Co. designer, and William J. Creuss, Socony-Vacuum representative.

Balancing Brightness, Strength and Economy in Bleaching Sulphate Pulps

It is commercially feasible to produce, from a sulphate pulp, grades of brightness which range all the way from the brown of the unbleached to the brightness of a fully bleached sulphite, i.e. from about 20 or 30 to 85 or 90 as determined by the G. E. Reflection Meter. However, the choice of a combination of procedures to obtain the brightness desired is a matter of selection and of balancing one result against another. Such balancing of results is also necessary to determine economy of production and quality of product.



Bulletins on Bleaching Procedures

The Hooker Technical Staff, which has been working with pulp and paper makers for many years, has made a thorough investigation of this problem. It has gathered comprehensive data to determine the effectiveness of some of the available procedures and to indicate suitable combinations of procedures for the simultaneous production of several brightness grades from a single unbleached sulphate pulp as it passes through the successive stages of a

single bleaching. The results of these investigations are available in our Bulletin 243 "Procedures and Brightness Grades in Bleaching Sulphate Pulps" sent free of charge when requested on your letterhead.

Consult our Technical Staff

While you have not been allocated all the Chlorine you would like to have, what we can ship you is the same uniform high quality which has been pleasing pulp and paper makers for years. Our Technical Staff may also be able to help you with your post war plans. In addition to the Bulletin mentioned above, Hooker has available bulletins and technical papers on various phases of pulp and paper bleaching. The personal help of our Technical Staff is available to you on your particular problems.

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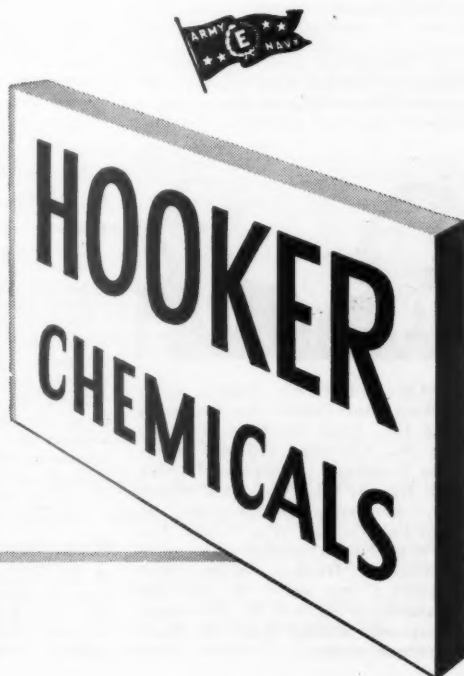
5268

LIQUID CHLORINE

BLEACHING POWDER

CAUSTIC SODA

SODIUM SULFIDE



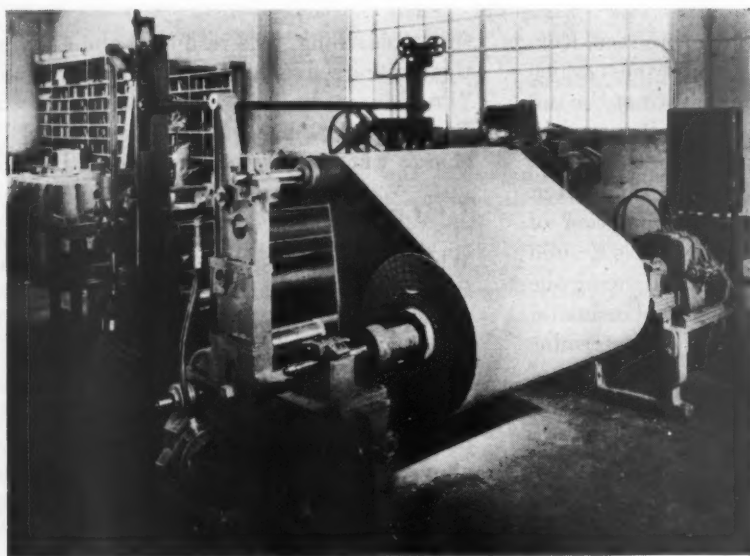
for other industries. It is believed that this type of container offers far reaching possibilities in the marketing of shortening, molasses and syrup, peanut butter, and other food products. It is known that several large producers of food products

are now examining the possibilities.

According to A. B. Huyssoon, sales manager of Continental Paper Co., the grades they are supplying for the present lube oil containers are standard in every respect. No special treatment is used aside from

"the normal manufacturing supervision." They are, however, experimenting with coloring some of the board "to obviate the necessity of printing and which, if successful, will result in considerable savings in cost."

Adhesive Products Inc. Winds Tape More Efficiently With New Cameron Machine Co. Equipment



● The slitting of gummed paper is different because of its slipperiness and for this reason slitting equipment must be of the best to obtain tightly wound rolls of gummed paper tape.

The Adhesive Products Inc. of San Francisco, who are manufacturers of a full line of gummed paper and cloth tapes of various widths, weights and colors, in cooperation with engineers of the Cameron Machine Co., Brooklyn, N. Y., successfully worked out their slitting problems of gummed products. The pur-

chase of a new model Cameron constant tension unwind unit, coupled with a Model 10 Cameron slitting unit that has been used for several years, has solved the slitting problem. Some of the very slippery types of gummed stock that previously could be rewound only by means of center winding are now being satisfactorily rewound on this new equipment.

Cameron Machine Co.'s new constant tension unwind unit is of particular assistance in all slitting problems because

COUPLED TOGETHER IN THE SAN FRANCISCO PLANT OF THE ADHESIVES PRODUCTS, Inc., is (left) a Model 10 Cameron Machine Co. slitting unit, with a new (right) model Cameron constant tension unwind unit, equipped with a Westinghouse electric eye for guiding the web, compressed air controls and other modern features.

it provides practically perfect web tension control. The controls are air-operated through a system of pressure control valves automatically acting on levers of a dancing roll and air brake. Compressed air is provided by a separate compressor and tank unit.

Another feature of the new unwind unit is that it is equipped with a Westinghouse electric eye for guiding the web. The parent rolls that are at times unevenly wound are fed to the machine by means of the electric eye in a manner that provides straight winding and makes it unnecessary to take trim on the guided edge of the web. The automatic guide, so provided, eliminates unnecessary trimming. There is at least one-half-inch of web saved over the old manual guide formerly used.

The kraft paper used for gumming by Adhesive Products Inc. is purchased from Longview Fibre Co., Crown Zellerbach Corp., and St. Helens Pulp and Paper Co. It is manufactured to rigid specifications.

Expansion for Donnacona

● A program of plant expansion and improvement has been practically completed by Donnacona Paper Co., Quebec, and production will be increased considerably, with reduction in costs of groundwood and newsprint manufacturing, states President Robert P. Kernan.

Operating profits for 1944 show a substantial reduction from the preceding year at \$1,314,688, compared with \$1,514,083.

National Lead Acquires Wm. A. Hardy Plant

● National Lead Co. has acquired the plant and assets of William A. Hardy and Sons Co., Fitchburg, Mass., and will operate the plant under management of its Magnus Metal Division.

Penn Salt Appointment

● Appointment of Mr. J. J. Duffy, Jr., as assistant manager of sales, Pennsylvania Salt Mfg. Co., is announced by George B. Beitzel, vice president in charge of sales.



JOE SCHEUERMANN (left), who tours West and South for Cameron Machine Co., from his base, 111 W. Monroe St., Chicago, enjoyed a reunion in Portland, Ore., recently with his old friend, ALAN C. DUNHAM (right), western representative of Lockport Felt Co. and Wm. Cable Excelsior Wire Mfg. Co., and Gen. Sales Mgr., Griffith Rubber Mills. Mrs. Scheuermann was guest of Mr. and Mrs. Dunham at 1059 S. W. Westwood Dr., Portland, during part of Joe's tour of Coast mills.

Seaboard RR Shows Interest In Pulp - Paper Industry

● As evidence of the great importance of the pulp and paper and lumber industries of Southeast United States to the Seaboard Railway, that company has appointed an industrial forester of its own.

He is Robert N. Hoskins, graduate of Iowa State College forestry school and formerly with Missouri and Florida state services as forester.

More than half the area of six states from Florida to Virginia are forested, supporting 1,500,000 people, according to Seaboard officials. Nine pulp and paper mills costing \$70,000,000 have been built on Seaboard lines since 1935.

Geo. Gerpheide on Trip

● George H. Gerpheide, president and general manager of the Hawthorne Paper Co., Kalamazoo, Mich., was visiting the trade on the Pacific Coast last month.

SPECIFY "GENERAL CHEMICAL"

for effective pH control and maximum sizing

GENERAL CHEMICAL COMPANY products for the Paper Industry

Aluminum Sulfate (Standard and Iron Free) • Copper Sulfate
Muriatic Acid (Hydrochloric) • Sodium Fluoride • Sodium Silicate
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TODAY more than ever, paper makers are insisting on General Chemical "Alum" in their operations because they can rely on its uniformity for maximum sizing and desired pH.

Careful attention to all production details plus constant laboratory control make General Chemical Aluminum Sulfate a product of high quality in its various grades. Specify "General" for your quality paper-making chemicals!

ALUMINUM SULFATE

Standard—Lump; Ground 99% thru 8 mesh, 95% thru 10 mesh; Powdered 95% thru 100 mesh.

Iron Free—Lump approx. $2\frac{1}{2}$ "; Ground thru 8 mesh.

SODIUM SILICATE

Solutions: from 38°—60° Baume. Wt. Ratio (Na_2O to SiO_2) from 1:2.00—1:3.40.

Appearance: Opalescent to clear.

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In Canada: The Nichols Chemical Company, Limited • Montreal • Toronto • Vancouver

M. L. Madden Becomes Chairman and J. L. Madden Is Elected President of H & W Company

● Directors of Hollingsworth & Whitney Co. announce that M. L. Madden has been elected chairman of the board. Mr. Madden has been associated with the company more than 58 years. He was elected vice president in 1911, vice president and general manager in 1918, and had been president since March, 1931.

James L. Madden, a vice president since 1941, was elected president to succeed his father, M. L. Madden. L. G. Glazier, controller since 1939, and vice president since 1941, was reelected. Robert Nivison of Winslow, Maine, was elected a vice president. Mr. Nivison has had 41 years of service with the company, and has been manager of mills since May, 1916. The company operates mills in Maine and Alabama.

At the stockholders' meeting preceding the meeting of directors, H. C. Thayer was reelected treasurer. Herbert G. Fales, of New York, was elected a director. Directors reelected were above officers and Walter B. Merlin, Herman W. Vaughan, Louis Oakes, W. Elliott Pratt, Jr., and Amor Hollingsworth.



JAMES L. MADDEN, of Boston, who has succeeded his father as President of Hollingsworth & Whitney Co. Although only 35, the new President of the Maine-Alabama operations has had wide and intensive experience. He is a graduate of Harvard College and Harvard Business School.

Newsprint Production Up

● Canadian mills produced 21,764 tons more of newsprint in the first two months of 1945 than in the first two months of 1944, an increase of 4.5%, according to the News Print Service Bureau. Output in United States was 4,403 tons or 3.9% more than in the first two months of 1944. In Newfoundland production was 10,114 tons or 23.8% more.

Newsprint production in Canada during February 1945 amounted to 239,661 tons and shipments to 217,220 tons. U. S. production was 58,228 tons. In Newfoundland it was 25,973 tons.

Prediction On Newsprint

● End of the war will not greatly change the present newsprint situation in Canada, in the opinion of Robert P. Kernan, president of Donnacona Paper Co., Quebec.

Mr. Kernan bases this prediction on the fact that Canada's chief newsprint customer is the United States, where business conditions have been stimulated rather than depressed during the war, and that the war has not brought about any abnormal demand for newsprint.

"Compared to 1944," says the Quebec newsprint executive, there can be no great increase or decrease in the amount of pulpwood available during 1945.

George Ware Rejoins News Print Bureau

● R. S. Kellogg, secretary of the News Print Service Bureau, has announced that G. A. Ware has rejoined the bureau as assistant secretary.

Mr. Kellogg recalled "the excellent work Mr. Ware did from 1919 to 1930 in developing cost accounting methods in both mills and woods operations for the North American newsprint industry."

During the past 14 years he has been conducting a cost engineering service through the American Paper and Pulp Association for all branches of the pulp and paper industry. This consulting service will be continued.

Russian Pulpwood Shipments Are "Interesting"

● Dubbed by producers in the industry as more "interesting" than economically significant are shipments of Russian pulpwood trickling into North Atlantic ports, chiefly at Boston. But wood in any quantity is welcome, and several companies are using the "several thousand cords" that have arrived.

The amounts are limited severely by the labor shortage at Russian ports with consequent handicaps to loading, and a high WPB official told PULP & PAPER INDUSTRY that there is "little hope of materially increasing the importation of Russian wood for some time to come."

No information is available at this time as to whether there will be imports across the Pacific. Stalin expressed himself to both the late Wendell Willkie and to Eric Johnston, president of the U. S. Chamber, as hopeful that more Russian pulpwood could be shipped. Initial shipments began last Spring when an upper Hudson mill began grinding USSR raw material. The quality of the more recent shipments is said to be excellent.

Siberian Forests Largest

● Siberia has the world's greatest reserves of spruce, Thomas H. Beck, president, Crowell-Collier Publishing Co., told a meeting of San Francisco business men on March 22.

"The stand there is so great that the United States' whole yearly consumption of wood pulp represents only about 10 per cent of the Siberian timber's annual growth," he said.

In a plea for extensive trade with Russia, he pictured that country as in dire need of "a thousand and one" commodities the United States has to sell. Russia's annual postwar requirements of steel were estimated at 150,000,000 tons as compared with a home productive capacity of 65,000,000 tons.

Untouched Forests Of Siberia Cited

● John B. Powell, for 25 years editor of the China Weekly Review in Shanghai, says:

"There's an untouched forest in Siberia, near the sea, that could feed the paper mills of this country from now on."

"The great remaining undeveloped parts of the world are in the Orient," he says. "The post-war era is going to be the era of the Pacific. Siberia, which is larger than the U. S., has but few more people than New York City."

Mr. Powell has just been released from a hospital in New York, with specially constructed shoes enabling him to walk. He lost both feet from gangrene and frostbite while a Jap prisoner.

Paper Industry Man Heads U. S. Fuel Rationing

● James Cousins Scully, vice president of Puget Sound Paper Box Co., of (707 Snoqualmie) Seattle, which make set-up boxes, is now chief of fuel oil rationing for the entire United States and is living in Washington, D. C., for the duration. His job is a far cry from the paper business.

Newsprint Price Raised to \$61 a Ton

● An increase of \$3 a ton in the manufacturer's ceiling price for newsprint paper has been authorized by the OPA. It is the third increase since newsprint was put under price control in March, 1942, when the price was \$50 a ton.

The increase will lift to \$61 a ton the ceiling price for standard newsprint delivered to 38 port cities. There are separate ceilings for deliveries in 10 specified zones and these are likewise raised \$3. Ceiling price for the base zone No. 4 becomes \$62 a ton.

About 3,250,000 tons of newsprint were used in United States in 1944. On this basis the increase means an added return of \$10,000,000 annually to producers, largely Canadian companies.

Application for increased newsprint prices was made by American companies, but the new schedule applies to paper imported from Canada as well. The increase was recommended by the Newsprint Paper Advisory Committee early in March. It does not so far apply to customers of Canadian newsprint outside the United States, and in Canada the price is unchanged, although it may be boosted if authorization is granted by Canada's Wartime Prices and Trade Board.

The OPA announcement notes that ten U. S. companies supply approximately 25 per cent of the newsprint consumed in the United States, with the balance obtained from Canada and Newfoundland.

Although the Canadian companies joined with U. S. companies in applying for higher prices, back in 1940 when increases totalling \$8 a ton were approved, the Canadian mills in the current instance did not apply, either for higher prices in the United States or to the Canadian authorities for higher prices in Canada.



trees for tomorrow

The war has emphasized how dependent America is upon its vast forest resources. Battle lines begin in the tall timber, for our trees are fighting too, as the endless source of the sinews of war.

But in this war-torn world of today we are also planning for tomorrow. Trees will be the source of thousands of new science-created articles. Already paper, rayon, tire cord, cellophane, plastics, chemicals, textiles and insulating materials are produced from the forests — and these are but a preview of things to come. That's why America's forest industry seeks to place its timberlands on a basis of continuous yield.

The trees which give us the pulpwood from which these countless products are made, yield the soundest wood in their early or middle life. Good forestry management calls for harvesting mature trees before decay sets in, and keeping a balance between wood crops and new growth.

The manufacture of dissolving pulp depends upon an adequate, uniform and continuous supply of wood. That is the basis upon which this Company operates — with an eye on today, and an eye on tomorrow — for even as we harvest timber for our pulp today, there is a reserve for the coming years of peace . . . a whole succession of new crops growing for the future.

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A Report on Australia-New Zealand Paper Mills

● A report on paper mills in Australia which use eucalyptus trees as their principal raw material has been brought to the U. S. by Roderick O'Donoghue, pulp and paper mill consulting engineer at 420 Lexington Ave., New York. Recently returned from a two months' trip to Australia and New Zealand, O'Donoghue was asked by PULP & PAPER INDUSTRY to comment on his 24,000-mile journey.

"Our trip was made at the invitation of Sir Keith Murdoch, managing director of the Australian Newsprint Mills Proprietary, Ltd., at Boyer in Tasmania," Mr. O'Donoghue said. "Sir Keith is also managing director and chairman of the board of the Melbourne Herald and affiliated papers." According to the consulting engineer, Sir Keith and other Australian publishers financed construction of the newsprint mill which started in 1941. "Production is at the rate of 100 tons per day on a modern high-speed machine," the New Yorker said. He gave large credit to L. R. Benjamin and associates for developing the mill, and said that years of development work was entailed.

(A more detailed illustrated article on this newsprint operation was carried in the September, 1944, issue of Pacific PULP & PAPER INDUSTRY, pages 22-24. In that article, P. R. Sandwell, former resident engineer of the Tasmania mill and now with Ontario Paper Co., pointed out that imported Canadian pulp was mixed with the eucalyptus product in order to maintain standard newsprint quality.)

After several weeks at Boyer, Mr. O'Donoghue, who was accompanied on a part of the trip by Eli Cowan, consulting engineer of Montreal, Quebec, crossed to the northern end of the island to visit Associated Pulp & Paper Mills, Ltd., at Burnie, where H. B. Somerset is general manager. This plant was built several years ago and consists of a 70-ton soda pulp mill with bleach plant and its own chlorine production, a 90-inch trim paper machine and one of 180-inch trim are part of the equipment there, O'Donoghue said.

The management at Burnie is made up of young men," Mr. O'Donoghue said, "and I was impressed with their energy and initiative."

Visits Kraft Mill

● On the Australian mainland again, Mr. O'Donoghue met Sir Herbert Gepp of Australian Paper Manufacturers, Ltd., of Melbourne, which has mills in Fairfield, Melbourne and Maryvale in Victoria, and at Botany Bay near Sydney, New South Wales. Visiting the Maryvale operations, Mr. O'Donoghue found the mill producing 120 tons of kraft pulp and 100 tons of kraft papers from the eucalyptus. "This mill was started Sept. 10, 1939," he said. "The logs are cut into billets which are chipped and cooked. Part of the pulp is bleached in a chlorine hypochloride two-stage system and shipped to other plants. The balance reaches the paper mill where wrapping and bag papers are produced."

At the Botany Bay mill there are five paper machines producing 200 tons of board and paper. They also cook straw and coat paper here. Nearby is the insulating board mill operated by Colonial Sugar Refining Company and using bagasse as a raw material.

"While we were still in Melbourne we visited the Division of Forest Products of the Commonwealth Council for Scientific and Industrial Research," Mr. O'Donoghue said. "I was much impressed with work being done by Mr. Clark, chief of the division. He has 150 men working on all kinds of forest products developments, including research work on pulp and paper."

The engineer took a flying boat to New Zealand and spent a week there at the plant of the Whakatane Board Mills at Whakatane, and in their forest plantations. Here, according to Mr. O'Donoghue, there is a 120-inch combination fourdrinier and cylinder machine producing 50 tons per day as well as grinders and a waste paper preparation system. The wood used is Monterey pine, planted only eleven years ago. "There are about 800,000 acres of such plantations in the central part of the north island and they are a marvelous thing to behold," O'Donoghue said. "Planted in volcanic soil in even rows about 8-inch centers, their growth is fast. The problem now is to use the crop which is rapidly maturing."

He visited the New Zealand Forest Products Company near Auckland where an insulating board mill and a sawmill have been installed, using the Monterey pine. Speaking of logging conditions in Tasmania, O'Donoghue said cruising is a tough job, especially due to the hilly terrain. Rainfall is up to 60 inches annually. Logs are hauled by tractor to landing stages where they are loaded onto rail flat car and then transported 20 to 40 miles, in the case of the Boyer mill. Logs are then cut into billets for grinding. Coal is mined locally, but is low in heat values.

Eucalypt Pulp Qualities

● Rex H. Dixon, chief works chemist for Australian Paper Manufacturers, Ltd., of Melbourne, wrote the World's Paper Trade Review of London regarding eucalypt pulps:

"The company with which I am associated has specialized in the application of the kraft process to the hardwood timbers, and we can assure our readers very definitely that the resulting pulps have a value much greater than that of a 'filler.' The pulps contain a high proportion of pentosans—a feature which enables them to be 'hydrated' fairly readily. As a result, it is possible to produce papers of normal bursting and tensile strength, whilst at

the same time securing the benefit of the excellent formation and finish which is associated with the shorter fibre. In the case of bleached grades, proportions of up to 85 per cent eucalypt pulp are used, and even 100 per cent sheets have been run successfully. In this field the normal tearing strength can be readily obtained.

"A valuable use for semi-bleached and similar grades of eucalypt kraft lies in printed wrappings, such as flour bags, envelope, and manillas generally. The sheet has a very good printing surface, together with the tensile strength associated with long-fiber pulps. With high proportions of eucalypt, it may be necessary to take special precautions if high tearing strength is wanted, such as the use of a special long fiber as part of the blend. In most instances, however, a good spruce fiber is used to the extent of 20 to 30 per cent of the pulp furnish."

Mr. Dixon sent a booklet entitled "Maryvale Wood Pulps," which said that use of eucalyptus wood for pulp was referred to as early as 1911 in Southern California experiments.

In 1918, I. H. Boas obtained promising results with Western Australian timber, and laboratory tests at the Forest Products Laboratory, McGill University, Montreal, revealed the high pentosan content of the eucalypt pulp, a feature which attracted further notice. Messrs. Clifford and Hope, working at Canton, N. C. (Champion Paper & Fiber Co.), obtained good results blending eucalypt pulp with longer fiber in the manufacturer of book and high grade papers, and recommended the use of the sulphate process. In 1922 a small commercial trial took place at the Australasian Paper and Pulp Mill at Geelong, Victoria, and later at Botany, New South Wales, and satisfactory papers were produced.

In 1932 Australian Paper Manufacturers, acting on a suggestion by the late H. Helin, turned their attention to the kraft process, and the preliminary laboratory tests gave highly promising results.

The Botany mill was completed within a few weeks of the outbreak of the present war, and a major contribution to the country's wartime requirements was thus provided.

Eucalyptus fiber length is less than that of spruce and other soft woods. It ranges from 1.2 millimeters in the best species to 1.0 in those which are frequently used for paper-making purposes. In a good average sample of eucalypt pulp approximately one-third of the fibers might be expected to measure 1.1 millimeters or more. It has been pointed out by many paper making authorities that the felting properties of a fiber are determined largely by the ratio of length to diameter. Considering the untreated pulps, this ratio for eucalypt is slightly lower than that for spruce—but on the other hand the early workers in the eucalypt field were quick to notice the excellent felting properties of the material.

Another important characteristic of eucalypt pulp, is the existence of a much higher proportion of xylan than is normally the case in pulping timbers—this component is present to the extent of 18-20 per cent. Xylan is necessary to enable hydration to take place.



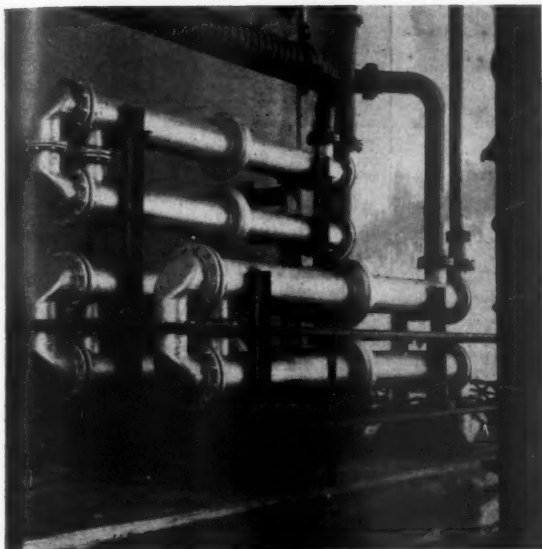
HARRY F. KOLB (left) and MILTON M. BIXBY, of HERCULES POWDER CO. Mr. Bixby is Director of Sales, Paper Makers' Chemical Dept., to which he was promoted last fall, and his headquarters are in Wilmington, Del. Mr. Kolb moved to San Francisco this winter from Wilmington and is Manager on the coast of casein and dairy products sales.

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Bartsch Describes Employees as Good Will Ambassadors

● Picturesque Fort Clinch was the scene on March 27 of the first service pin dinner for employees of the 5-year-old Fernandina Division of Rayonier Incorporated, Fernandina, Fla.

Senator A. G. McArthur acted as master of ceremonies. Resident Manager Norman B. Gibbs read a message of congratulations from Ed Bartsch, president of Rayonier. J. T. Sheehy, recently elevated to assistant manager, was to have appeared on the program but was called to the West Coast by the death of his mother.

Fifteen and ten-year pins were awarded 13 employees who had begun their careers with Rayonier in western mills. The awards for 15 years were to C. S. Carr, D. D. Rhebeck, E. C. Lemley and H. Miller. Previously awarded 15-year pins went to Mr. Gibbs and G. Weighton. Ten-year pins were awarded Mr. Sheehy, O. J. Ashford, E. E. Boner, C. Derry, J. L. Chance, N. Widmann and Ross Wynans.

Five-year pins were awarded 158 employees, including 63 on military leave.

In his message, Mr. Bartsch said:

"We are at work, preparing for our after-war responsibilities. Perhaps all too few people realize how these plans affect the South—how inseparably we are linked with its future prosperity.

"Our road to public understanding must begin in the mill, for favorably employee opinion is necessary to favorable public opinion. The influence of even a single worker is vast. Your attitude in presenting this picture, as much as anything that can be done by management, will shape the future for all of us.

"Rayonier is not so much bricks and mortar and machinery, it is a group of human beings who have pooled their skills, energies and ambitions to provide products and services that benefit all mankind."

James Sheehy In Charge Of Fernandina Production

● James T. Sheehy, former chief chemist, has been appointed asst. mgr. in charge of production of the Fernandina, Fla., division of Rayonier Incorporated, with a view to assuming resident managership when Norman B. Gibbs retires. Mr. Sheehy was formerly employed in the Grays Harbor division, Hoquiam, Wash., transferring to Fernandina in 1939 to assist in starting that mill in production of dissolving pulps from Southern pine. He joined Rayonier in 1933 after graduating from the University of Washington in chemical engineering.

Joseph H. LaChance, former assistant superintendent, was appointed operating superintendent, succeeding Ed J. McGill.

George E. Scofield was promoted from assistant chief chemist to chief chemist. Joseph Tailbird was promoted to office manager.

Ed McGill At Shelton

● E. J. McGill, superintendent of the Fernandina plant, has been transferred to the Shelton, Wash., plant in a like capacity, to assist in the reopening of that mill. The company recently announced this unit would be reopened in the fall.

Dr. M. E. Kinsey, research chemist at Fernandina, has been transferred to the Central Chemical Laboratory of the company at Shelton, his new duties to include technical sales service work.

D. D. Rhebeck, Fernandina office manager, has been transferred to Olympia, Wash., to head the accounting department of the Woodlands Division.

Shelton Mill Will Reopen 100% On Nitrating Pulp

● When the Shelton, Wash., Division of Rayonier Incorporated reopens, probably this fall, its entire production is scheduled to be nitrating pulp for conversion into smokeless powder, according to



NORMAN B. GIBBS, Resident Manager at the Fernandina, Fla., Division, Rayonier Incorporated.



ED MCGILL, Superintendent, transferred from Fernandina, Fla., to Shelton, Wash., by Rayonier Incorporated.

Capt. G. S. Quick, Ordnance Dept., Office of the Chief of Ordnance, War Department, Washington, D. C.

Plans to reopen the Shelton mill were announced by President Edward Bartsch in the February issue of PULP & PAPER INDUSTRY. Closed since August, 1943, by the log shortage, its reopening was made possible by purchase of the extensive timber holdings and logging equipment of Bloedel, Donovan Lumber Mills on Olympic Peninsula.

According to an announcement made in Shelton by Rayonier officials, the reopening is planned for next fall. Repairs and overhauling are now being carried on by a crew of 70 to 80 men.

The mill will employ 450 men and women, including a large number of former employees.

For the present the chipper plant in Reed Lumber Mill 1, which has been cutting fir chips for the Crown Zellerbach kraft mill at Port Townsend since the hemlock pulp operation closed, will continue.

The laboratory division at Shelton, which serves all Rayonier operations, has carried its full complement through the shutdown, and continues with about 70 employees.

Mike Buckley Buys Home In Everett

● R. M. "Mike" Buckley, vice president, Soundview Pulp Co., purchased a home at 2202 Rucker Ave., Everett, Wash., and on March 19 moved in with his family.

While Mr. Buckley was house-hunting and making another business trip east after bringing the family west in January, Mrs. Buckley and their two children lived with her parents in Tacoma.

The Buckley family had lived in New York and Washington, D. C., for two years, while Mr. Buckley was with the War Production Board and later representing Soundview in the east.

Dr. Stanko Moves to N. J.

● Dr. John J. Stanko, former director of research and development, Pioneer Division, The Flintkote Co., Los Angeles, has taken over what is described as an important research job in the company's East Rutherford, N. J., plant.

Dr. Glenn W. Klingaman has succeeded to Dr. Stanko's position in Los Angeles.

Dr. Stanko attended Regis College, Denver, where he played football, and Catholic U., Washington, D. C. Dr. Klingaman, Iowa-born, attended Edmonton College, Alberta, and Northwestern University.

100 Safety Diplomas

● Certificates were awarded 100 graduates of 1944-45 courses in first aid at the Camas, Wash., mill of Crown Zellerbach Corp. in Nora Self Hall, Camas, on April 10.

Otto Hartwig, safety supervisor for Crown Zellerbach Corp.'s Northwest operations and president of the Oregon Safety Conference, presided. Jack Robertson, Camas safety supervisor; Fred Pontir, instructor, and others, spoke.

SIGNAL CORPS
PHOTO

Death for the Enemy —packed in PAPER

Out of its paper jacket—into the waiting barrel of a giant gun—then roaring on its way into the enemy lines. Up to the very moment of its mission of death, each shell is packed and protected in paper. Shell cases are made of paper board. Bullets and hand grenades are packed in paper cartons.

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Long Range Forest Policies Pay Dividends For Rayonier Operations at Fernandina, Fla.

By W. E. CROSBY

WHEN Rayonier Incorporated, with pulp mills at Hoquiam, Shelton and Port Angeles, Wash., decided to establish a fourth large plant at Fernandina, Florida, company executives, looking well into the future, laid out a comprehensive forest land and reforestation program, which in the years to come would assure the new Florida plant, an adequate supply of raw material.

This land acquisition and reforestation program was immediately launched, once the company definitely decided to build its plant at Fernandina. Today results of this long-range program are already apparent. The company owns well in excess of two hundred thousand acres of forest land and has a land and reforestation department second to none in America. From these lands a substantial part of the raw material needed to maintain the pulp mill will be derived, although at present Rayonier Incorporated, like other southern pulp producers, obtains the greater part of its pulp wood from lands not company owned. Purchase of such wood has released millions of dollars to farmers and other land owners and added materially to the prosperity of the south. Timber is definitely a commercial crop in the deep south, ranking with cotton, corn, and other natural resources.

It took me a little over an hour by bus to get from Jacksonville to Fernandina.

One of the first things Rayonier

(The author of these notes, Mr. Crosby, toured southern United States as a representative of PULP & PAPER INDUSTRY. He has had many years of experience as an observer and writer on forest industries and forestry problems in other regions of the continent).

Incorporated did on entering the South was to engage A. G. McArthur as manager of its Woods Department. Mr. McArthur was well known in North Florida and Georgia. His assistant is H. D. Cooke, who like Mr. McArthur, knows southern timber. G. W. Moseley is forester.

In order to facilitate management of company lands, the holdings are divided into well defined tracts each in charge of a ranger. All told, the land department has a staff of from twelve to fifteen experienced men, who are constantly engaged in supervising company forest lands with the major objective of so managing the holdings that the maximum quantity of timber can be grown.

Forest Management Program

Forest management on the Rayonier lands has many angles but protection from fire is one of major importance. There is hardly an acre of company lands but what can be seen from the many lookout towers which dot the South's forests. These towers are connected by telephone and radio and have been the means of detecting fires and enabling suppression crews getting on the job before the fires reached the conflagration stage. The state does a



A. G. McARTHUR, manager, woods department, Fernandina, Florida.

god job of fire detection and suppression. Rayonier maintains its own fire fighting crews during the fire season, having tank cars and trucks with power take-offs to operate the pumps.

Considerable control burning is practiced. This program which is planned with great care is aimed to eliminate the fire hazard and fire-proof the area in such a manner that a new crop of timber may be obtained. They do not worry too much over slash, for in most cases not much slash is left in the woods and in a year or so most of the debris will have disappeared.

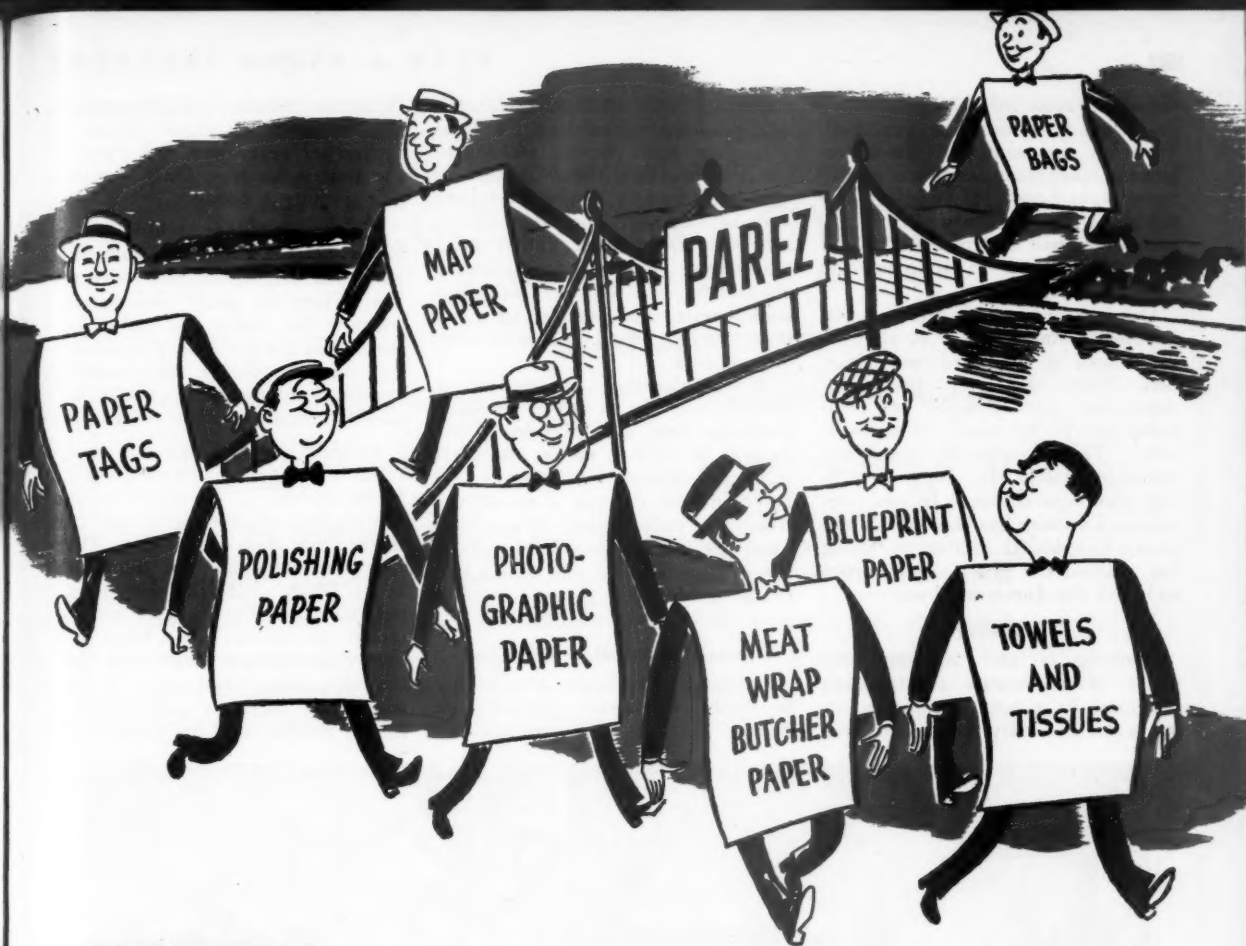
Roads penetrate most of Rayonier's timber land holdings. Some are main county roads which, of course, provide excellent fire stops. Then there are numerous secondary public and private roads, some of which were opened up by the CCC. The company considers it good business to keep many of these roads open and clear. Power plows are used to clear the ditches. These roads not only make it possible to get into the timbered areas with trucks, equipment and men for normal purposes, but also in case of fire.

Thinning

Another important forest activity is thinning. In natural reforestation the young pines comes up pretty thick, in some instances too thick.



One of twenty-seven pulp wood barges operated on rivers by Rayonier Incorporated.



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Growth is retarded in such cases, so some hand thinning is practiced. Thinning also takes the form of removing stagnant trees which permit more rapid growth of young, vigorous stock. They also cut out flat top trees which will not grow much more and which tend to suppress the younger trees.

One reforestation problem on Rayonier's lands as well as all over the south, is the hardwood situation. From the pulp producers' standpoint certain types of hardwood are pretty much of a headache. The hardwood sometimes comes in quickly after logging, stiffling pine reproduction. In some instances Rayonier has slashed out the young hardwoods and by so doing has enabled the pine to get started and gain the dominating position.

Planting

Planting is also an important phase of Rayonier's reforestation program. As a general thing planting is not necessary. But where fires

have swept over a considerable acreage, planting is resorted to. Then there are some areas where the stand is too light. Mr. Cooke told me that planting results had been very satisfactory. They had 72 per cent survival on one rather large plantation. They are now planting about 640 — 10x10 per acre. The state forestry and park service maintains a tree nursery and sells seedlings at cost.

Where planting is resorted to, or where some six or seven hundred seedlings per acre develop from natural reseeding, not many years will pass before the loggers will move in and remove some of the trees for pulp wood. When that time comes definite cutting schedules will be worked out, which will result in orderly planned cutting over the company's lands.

Climate Favorable for Crop

Climatic conditions are highly favorable to timber growing in North Florida and Southeastern

Georgia, tributary to Fernandina. The rainfall averages about 58 inches per year. May and June are the wettest months. Only occasionally is there a drought.

The temperature seldom drops below 12 to 14 degrees. Such temperatures are considered extremely low. There is good tree growing weather for about ten and a half months of the year. So it is no wonder that the timber crop develops rapidly, reaching pulp wood size in about 15 years, in some areas less.

As, has been pointed out in this series of articles on the deep south's forest industry, the south is timber-minded. Forest lands are considered first class investments. There are practically no tax delinquent lands. Many professional and business men in the south have invested money in timber lands. One well-known southerner recently in Seattle, who owns 5,000 acres of land which now carries a good stand of thrifty timber, said his timber crop



IN RAYONIER FORESTRY PLANTATIONS IN FLORIDA:

Upper left: A view of young growth. Upper right: The edge of a young Rayonier forest contrasts sharply with the land to the right of this picture, which another company failed to re-forest.

Lower left: Rayonier timber which has been thinner, leaving a good stand of young timber. Note absence of slash. Lower right: HENRY D. COOKE, Asst. Woods Mgr., Rayonier Incorporated, standing beside a tree planted 5 years ago.

THE 45th ANNUAL REPORT OF ST. REGIS PAPER COMPANY

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Starting with the trees on owned or leased timberlands, with operations and products integrated, St. Regis Paper Company and its subsidiaries manufacture and sell a wide range of wood cellulose products. These commodities, industrial in

nature and essential in character, include Pulp, Paper, Multi-wall Paper Bags, Bag-making and Bag-filling machinery, Plastics and Rayon . . . currently, the entire production is for direct or indirect war use and for essential civilian requirements.



PACKAGING SYSTEMS

Multiwall Bags are helping deliver the goods on the war front and the home front. Made of several thicknesses of tough kraft paper, these heavy-duty shipping

sacks resist moisture, exposure and rough handling . . . are preferred for chemicals, food stuffs, building materials and fertilizers.

Bag Machines . . . Bag-making machinery and a wide range of bag-packing machines are produced by the St. Regis Engineering and Machine Division. They are extensively used in the United States and many foreign countries to save time and manpower for industry.



RAYON

The latest addition to St. Regis family . . . rayon . . . is manufactured by the viscose process at the Skenandoa plant. Skenandoa's production is used for medical and

hospital supplies and clothing for our armed forces and civilian populations of allied nations and occupied countries and for essential civilian clothing.

With improved and stronger yarns in the post-war period, Skenandoa will be foremost in the production of rayon for use in clothing, household furnishings, transportation and communication fields.



LIGHTWEIGHT PRINTING PAPERS

These papers provide clean, opaque sheets which require less wood, thereby helping to ease the pulpwood shortage.

Uses include V-mail paper, overseas and domestic magazines, catalog and directory papers. Current research points to wider post-war uses.



PANELYTE

The St. Regis Structural Laminated Plastic is reducing weight, saving time and money on electrical and structural parts (molded and fabricated)

for the Armed Services, the aviation, automotive, electronics, and refrigerator industries. Panelyte resists corrosion and high temperatures . . . not affected by water, brine, oil or ordinary solvents . . . supplied in paper, fibre glass, fabric, wood, or asbestos bases.

SUMMARY OF CONSOLIDATED INCOME for the Year Ended December 31, 1944

| | |
|--|-----------------|
| Net Sales, Royalties, and Rentals | \$48,388,277.14 |
| Costs and Expenses | 42,798,447.26 |
| Operating Income | 5,589,829.88 |
| Income Credits | 413,969.22 |
| Gross Income | 6,003,799.10 |
| Income Charges | 419,150.02 |
| Net Income before Provision for Income and Excess Profits Taxes | 5,584,649.08 |
| Provision for Income and Excess Profits Taxes: | |
| Federal: | |
| Income taxes | \$1,250,000.00 |
| Excess profits tax (less post-war refund of \$116,000.00 and debt-retirement credit of \$120,000.00) | \$2,125,000.00 |
| Canadian and other foreign taxes (less Canadian post-war refund of \$16,216.22) | 169,614.58 |
| Total | \$3,544,614.58 |
| Net Income before Deduction of Minority Interests | 2,040,034.50 |
| Deduct Minority Interests in Income | 186,520.69 |
| Net Income | \$1,853,513.81 |

St. Regis Paper Company is in a favorable position to expand its business in all divisions during the years following conclusion of the war. Factors which support this belief are (a) the modernization program, (b) research and new developments, (c) widened acceptance of the company and its subsidiaries, and (d) the great diversity of markets and industries served.

Currently, St. Regis products move directly or indirectly to our Armed Forces and on lend-lease requirements. They also serve 30 major war-supporting industries.

DIRECTORS

| | |
|----------------|---------------|
| J. O. BULKLEY | H. R. LAMB |
| T. H. COSFORD | H. S. LEWIS |
| W. DELONG | H. E. MACHOLD |
| W. K. DICK | C. R. MAHANEY |
| W. J. DIXON | R. B. MALTBY |
| R. K. FERGUSON | C. B. MARTIN |
| M. F. FORD | J. A. QUINLAN |
| W. H. VERSFELT | |

ST. REGIS PAPER COMPANY

TAGGART CORPORATION • SKENANDOA RAYON CORP.
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New York 17: 230 Park Avenue

Chicago 1: 230 N. Michigan Ave.
Baltimore 2: 2601 O'Sullivan Bldg.

San Francisco 4: 1 Montgomery St.
Montreal: 924 Canada Cement Bldg.

has now reached the point that buyers are wanting to cut it. He said they want to clear cut, but he believes in selective cutting and hopes to eventually negotiate such a cutting deal.

The company has constantly discouraged broadcast burning by farmers and stock raisers. Such fires not only destroy young seedlings on farmers' lands but develop a serious fire hazard to adjoining forested areas.

Since Rayonier obtains much wood from off-company lands, special efforts have been and still are being made to assist farmers and other land owners in practicing good forestry, to the end that a maximum crop of timber be produced all over the area.

At strategic locations along highways through Rayonier's forest lands, signs have been set up which indicate to the public that such lands are under careful management and inviting the public to wit-

ness these demonstrations in the proper cutting methods and setting forth highlights of good practices.

Rayonier's timber lands have been well blocked and are for the most part in comparatively large holdings. This facilitates management and tends to minimize the fire hazard. Most of the company's lands are within thirty miles of the pulp mill at Fernandina.

One area where logging has been in progress is forty miles from the mill, but the pulp wood is hauled by trucks to the river where it is loaded on barges. They tow out four barges at a time. They have 27 barges and three tugs.

Modern Logging Equipment

Rayonier is now experimenting with more modern logging equipment than is generally used in southern logging operations. One new set-up calls for the hauling of tree length logs by tractors or trucks to railroad landings where cut-off

rigs will be located to cut the logs into pulp wood lengths and convey the wood to the car. This arrangement is expected to eliminate much of the hard hand handling and loading of cars.

Other modern equipment to be added includes seven tractors.

The company has recently established a new logging camp near Fargo, Ga., having purchased a large block of timber in that area.

While turpentine has been and still is practiced throughout much of the south, Rayonier has discontinued this. The cat faces which result from turpentine represent a definite loss of valuable pulp wood.

Rayonier looks forward with confidence in the expectation of being able to maintain high standards of forest management and through this effort to provide its pulp mill with a substantial part of its needed raw material . . . pulp wood.

Malsberger Heads

Southern Pulpwood Assn.

● H. J. Malsberger, Florida state forester, resigned that post to become manager of the Southern Pulpwood Conservation Assn., with headquarters at 1501 First National Bank Bldg., Atlanta.

He succeeded Frank Heyward, Jr., who entered private business.

Powell River Cafeteria

● A new \$25,000 cafeteria has been completed by Powell River Co. at Powell River for the company's employees. Local labor unions have appointed an advisory committee to co-operate with the management in operating the cafeteria, which has a seating capacity of 208 and sells meals at cost.



JOHN KOESTER (left), Secretary, and NORMAN SCOTT, Sales Manager, Orr Felt & Blanket Co., Piqua, Ohio. In the early days of the Pacific Coast industry, Mr. Scott was a salesman in the western territory.

NEWS OF

The Pulp and Paper Industry--

15 YEARS AGO

International Paper Co. began construction of a 200-ton kraft paper mill at Panama City, Florida. This will be the company's sixth mill in the South, all of them having total capacity of 1,000 tons per day.

R. B. Wolf, president of Pulp Bleaching Corp. and former operating head of some of the best mills in the country, attended a Coast TAPPI meeting at Longview, Wash., April 5 and during his western trip checked over plans for proposed new pulp mills. He said he was pleased with Pacific Coast prospects.

Royal S. Kellogg, of the Newsprint Association, told a Montreal gathering that considerable savings are possible in manufacturing between the wood stage and newsprint. A \$50,000 fund for research was set up.

A. G. Natwick, formerly with Lincoln Pulp & Paper Mills of Merriton, Ontario, is now with the Camas, Wash., plant of Crown Willamette Paper Co.

10 YEARS AGO

Sulphite Pulp Suppliers, a cartel of European pulp producers, cut the price of bleached sulphite pulp to the U. S. by \$5 a ton and unbleached sulphite by \$4 a ton. This was calculated to cost American producers an annual income of about \$6,000,000 on the basis of 1934 production.

G. H. McGregor, University of Wisconsin graduate, who joined Weyerhaeuser Timber Co.'s Pulp Division in September, was promoted to technical director of the division.

H. N. Simpson, resident engineer at National Paper Products Co., Port Angeles, Wash., was married to Helen Eubanks of Texas.

Natwick, Lowndes Tour South

● A. G. Natwick, assistant resident manager, Crown Zellerbach Corp., Camas, Wash., and Wilbur K. Lowndes, of the company's Central Engineering Dept., Seattle, recently returned from a tour which took them to mills in California and Louisiana.

Ask OPA Extension

● The U. S. Chamber of Commerce and the National Assn. of Manufacturers have filed statements with a senate committee, asking for an extension of the OPA for one year only. The National Association of Manufacturers opposes the use by OPA of the profit element in deciding whether to authorize increases in ceiling prices, and both groups ask that ceilings be determined on the basis of production costs.

Port Royal Mill Closes

● The Port Royal Pulp & Paper Co. at Saint John, N. B., for the first time in its history was forced to close down its mill in March because of lack of pulpwood. Joseph E. Lacroix said that the shutdown might be for only a few weeks until the snow and delivery of wood could be resumed.

John Moak Promoted

● John H. Moak has been appointed master mechanic at Soundview Pulp Co., Leo S. Burdon, general manager of the Everett mill, recently announced.

Mr. Moak succeeds Arthur E. Duke, who has opened up a small business of his own. Mr. Moak has worked at Soundview for several years, except for a short period at the Brunswick Pulp & Paper Co., Brunswick, Ga.

Prisoner, Gets Air Medal

● Cpl. John E. Frederick, U. S. Army Air Corps, on leave from the sawmill dept., West Linn, Ore., Division, Crown Zellerbach Corp., has been awarded the air medal for his flying exploits although he is now a prisoner in Germany.

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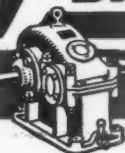
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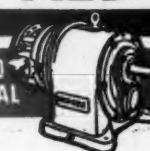
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Hyer and Nichols Resign Key WPB Positions

● Allan Hyer, who has served the War Production Board since almost the beginning of the war, has resigned his position as chief of the distribution section, Paper Division, Forest Products Bureau. His resignation was effective March 20 and he returns to his pre-war duties as sales manager of Black-Clawson Co., Hamilton, Ohio.

Walter Croan, formerly with the West Virginia Pulp & Paper Co., and more recently in the civil service, has succeeded Mr. Hyer with the title of acting chief of the section which controls all distribution of paper and pulp making machinery and equipment made in the United States, for both domestic and foreign installation.

Obviously, Mr. Hyer's position was one of great importance, requiring tact and judgment and his long tenure in Washington was the best proof of the splendid job he did, winning universal respect and admiration of the industry.

Another resignation of a man who has given long service to the WPB was that of H. O. Nichols, chief of the coarse paper branch of the Paper Division since Nov. 1943, on leave from his position as head of the New York office of Crown Zellerbach Corp. He went to the Pacific Coast where he will serve that company.

Succeeding Mr. Nichols as of April 1 was Charles J. Dynes, of the Sorg Paper Co. and formerly stationed at Vancouver, B. C., offices of that organization. Mr. Dynes has served for over a year in the Paper Division as industrial and specialty paper specialist.

Other resignations were imminent in the Paper Division, delayed only by difficulties in obtaining A-1 successors.



THIS UNION BAG & PAPER CORP. Girls Basketball team easily won the Savannah, Ga., Industrial League championship—winning 11 of 12 games against three strong opponents.

The company deserves another star for supplying the girls with attractive "uniforms." L. to R.: Nan Norwood, Edith Tippins, Dorothy Collins, Runelle Heidt, Merle Dillingham, Maxine Beville and Louise Dicey. Sorry—no phone numbers.

Northeast Mills Organize To Study Problems

● Twenty-two Northeastern U. S. companies representing 40 mills this month formed an association named the North Country Paper Manufacturers.

Their purpose is to attempt to solve cooperatively the problems common to the industry.

The first meeting was at Watertown, N. Y., and Clifford C. Wenzel, personnel director, St. Regis Paper Co., Deferiet, N. Y., was elected president.

Suggests Mill Men From This Side Visit Sweden

● American and Canadian industry executives and technical men will be welcome in Sweden after the war and will be given opportunity to see for themselves the advances made in the Swedish pulp and paper industry during these war years.

This invitation is extended through PULP & PAPER INDUSTRY by G. P. "Gus" Genberg, in charge of development of dissolving pulps for the Cellulose Sales Co., largest pulp producers in Sweden.

Mr. Genberg, who has been making his headquarters at his company's sales offices 250 Park Avenue, New York, has made an extensive tour of pulp, paper and rayon operations in the United States, Canada and South American countries during the past five months.

He returned to New York March 30 after visiting a number of Canadian mills and most of the large Pacific Northwest mills. He said he was "very impressed by the efficiency and up-to-date methods used in the far western pulp mills."

Mr. Genberg urged cooperation and frequent exchange of technical information among European, American and Canadian producers.

Mr. Genberg is well known in the North American industry, having served in U. S. and Canadian mills for 15 years, from 1919 to 1934. He was with

The Fraser Companies, Ltd., of Canada for 11 years.

His present affiliation, the Cellulose Sales Co., manufactures one million tons of kraft and sulphite pulps annually. Of this amount, he said, 120,000 tons are dissolving pulps.

He is planning to leave for Sweden late in May, and before his departure he plans to visit several Middle West and Northwestern U. S. mills. He left Sweden for the Western Hemisphere tour last Oct. 24.

Swedish Ships For Pulp

● The action last month of Sweden in placing its merchant fleet in the Allied shipping pool is expected to facilitate early resumption of pulp and paper exports from that country when the Skaggerak is opened up to sea traffic.

According to latest statistics published by the Association of Swedish Shipowners, the Swedish merchant marine totaled 1,274 steam and motor-driven vessels, with an aggregate of 1,475,000 gross tons (as of Dec. 31, 1944). War-time losses amounted to 600,000 gross tons, or about 900,000 tons d. w.

First Swedish Ship on Coast

● The first Swedish ship to reach the Pacific Coast since the outbreak of the war arrived at Portland, Ore., Apr. 9.

E. W. Tinker, executive secretary of the American Paper & Pulp Assn., says there is some possibility of Scandinavian pulp reaching the U. S. market after V-E Day, but expressed the opinion that in view of the heavy demands in Europe the full available inventory in Scandinavia cannot be looked upon as a potential supply for U. S.

Swedes to Make More Paper

● An increase of about 15,000 tons in the capacity of Billerud's Gruvön and Saffle paper mills of Sweden is being anticipated, according to a foreign publication. Annual production at present is approximately 50,000 tons.

Timber fellings in Sweden were reported increasing this spring in anticipation of the opening of foreign markets for pulp and lumber.

Swedes Claim New Rayon Pulp Process

A radio message from Stockholm to the American-Swedish News Exchange in New York makes the assertion that The Uddeholm Co., large steel mill and wood pulp plant in central Sweden, has developed a new method of making a highly purified rayon pulp which yields as a by-product 165 liters (about the same number of quarts) 95 per cent alcohol per ton. The firm has begun an extensive building program which will enable it to attain a production capacity of 15,000 tons annually, it is said.

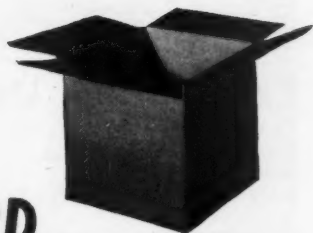
The next installment of "Acid Making in the Sulphite Industry," by A. H. Lundberg, will be published in the June issue of PULP & PAPER INDUSTRY. Mr. Lundberg is now traveling on business.

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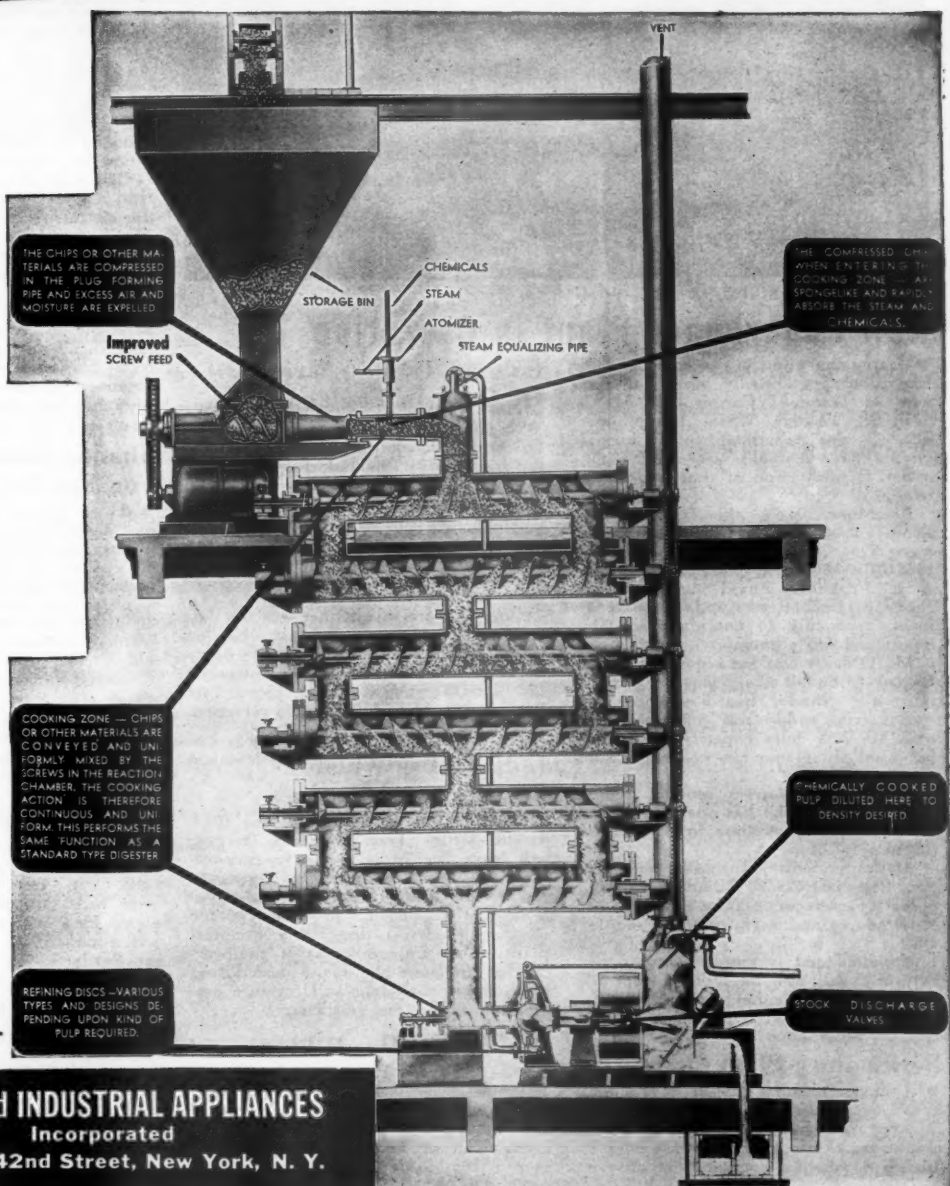
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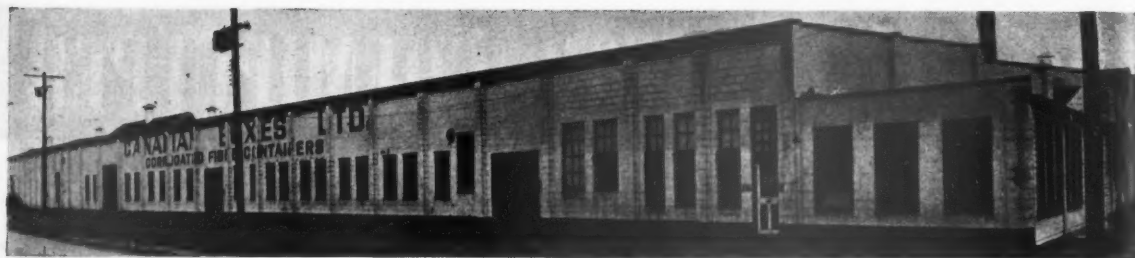
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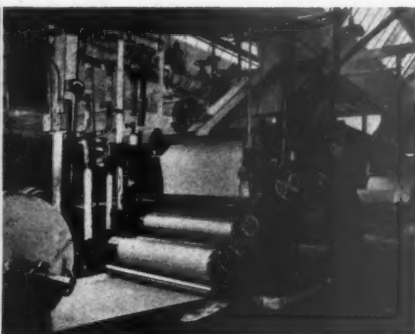


Pacific Mills, Ltd., Acquires Container Plant

CANADIAN BOXES, LTD., in Vancouver, B. C. And below:

Left: Canadian Boxes' boiler room showing Combustion Engineering Co. automatic stoker.

Right: View of the plant's Langston single-facing unit.



New Paperboard Plant in Operation

● Using ingenuity to overcome wartime limitations, Joe O'Reilly, owner and manager of Standard Carton Co., 817 E. 27th St., Tacoma, Wash., has in operation a new paperboard plant in that city, which eventually will add 64 tons a day to production of that critical war material.

Machinery from the former Berkheimer roofing plant and used equipment from the east have been assembled in a 189' x 40' plant. In operation is a 3-cylinder board machine with Pusey & Jones dryers and other equipment, producing 24 tons daily of chipboard and kraft liner.

Mr. O'Reilly also has acquired through Bagley & Sewall Co., from an Indiana mill, a 3-cylinder board machine, 60 inches trim width and 300 feet long with 40 tons daily capacity which will be installed as soon as war restrictions permit.

Mr. O'Reilly plans to move a folding box plant which he has operated for 15 years on Pacific Avenue in Tacoma to his new location.

Alexander Duve, formerly with Pacific Paperboard Co., Longview, Wash., is his superintendent. The company has 58 employees and eventually will employ 120.

Material used is largely waste paper but pulp will also be utilized and will be bought from either the Tacoma St. Regis kraft mill or some other nearby mill, in accordance with WPB controls.

Berkheimer Plant Sold

● J. E. Berkheimer's plant in Tacoma, Wash., which for many years has manufactured saturated felt, building paper and asphalt products, has been sold to Joseph S. Allen, a company executive.

Colonel Triplett Writes Of Duty In England

● Lt. Col. Cecil Triplett, U. S. Army Division of Chemical Warfare, is spending his time in England these days with the army headquarters ship salvage office, investigating ship accidents.

There just isn't any chemical warfare, he explains in a letter to Fred Weleber, chief chemist, Hawley Pulp & Paper Co., Oregon City. The colonel is on leave as a chemist at Hawley.

"Gas warfare will neither win nor lose for either side now," he said. He has been in England nearly two years. Friends can write him as follows: Lt. Col. Cecil Triplett, 0-326595, Hqtrs. 14th Port, APO No. 229, care Postmaster, New York.

India to Use Wood For Chemical Product

● Walker Tilley, forester for the Willamette Valley Tree Farms in Oregon, will leave for India to be forestry officer for the Intercontinent Corp., 30 Rockefeller Plaza, New York. Mr. Tilley's job will be to produce 200-300 tons of wood per day for a chemical plant which Intercontinent is engineering for the State of Travancourt. Using scrub wood, the plant will produce ammonium sulfate for fertilizer.

Doc Holzer Heads Lions

● W. F. "Doc" Holzer of the Central Technical Dept., Crown Zellerbach Corp., who is well known in national TAPPI circles, is the president of the Lions Club of Camas, Wash., for this year.

● Pacific Mills, Ltd., British Columbia pulp and paper manufacturers, added to its diversity of production recently by purchasing outstanding shares of Canadian Boxes, Ltd., for several years an important factor in the Western Canadian fiber shipping container industry.

Management of Canadian Boxes, Ltd., is directed by Charles H. Forster, sales manager; G. R. Sharpe, production manager; R. G. Armstrong, office manager. Directors are Paul E. Cooper, president; J. A. Young, vice president and treasurer, and J. H. Lawson, secretary, all of Pacific Mills, Ltd.

Management thus remains virtually unchanged, but the company's horizons for future expansion have been greatly widened by direct association with the larger organization.

Canadian Boxes' factory is on Industrial Avenue, Vancouver, B. C. In 1926, during its first year, employees numbered 15. Today there are more than 125. The main plant covers a city block with additional warehouse space.

Main factor in the company's growth has been expansion of the fruit, jam, vegetable and fish canning industries and manufacturing and wholesale grocery trades. Another influence has been the obtaining, through steady effort, of an equitable Canadian freight classification.

Simons Moves Office For New Pulp Mill

● H. A. Simons, consulting engineer, has moved with his staff from Seattle to the Holden Bldg., in Vancouver, B. C., for the duration of designing and construction work on the new \$6,000,000 sulphate pulp mill which Boledel, Stewart & Welch, Ltd., is building at Port Alberni, Vancouver Island, in connection with lumber operations there.

Complete construction of the proposed plan which will have a capacity of 50,000 tons of pulp a year is expected to take several years. Contract bids for all or part of the work may be invited this summer.

Palmer Undergoes Operation

● Arthur Palmer, groundmill supt., West Linn, Ore., division, Crown Zellerbach Corp., returned to work March 13 after being off six weeks for an operation. He is a Canadian war veteran and was a patient on an exchange basis at the Portland, Ore., veterans hospital.

Don Guild Dies

● Staff Sgt. Donald Guild, U. S. Army Air Transport Command, son of the late George G. Guild, former vice president of Huntington Rubber Mills, Seattle, died in Alaska in early March after a short illness. He was buried in Fairbanks, Alaska.

His father died Jan. 3.

14

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Bankus Outlines Company Plans at Los Angeles Dinner



CROWN WILLAMETTE dinner, Los Angeles, Mar. 16—Top row (l. to r.): Hallie Burleigh; J. F. "Jake" Gigler, Gen. Supt.; Frank A. Drumb, Crown Zellerbach Corp., Director of Industrial and Public Relations; Albert Bankus, Vice Pres.; Lester E. Remmers, Los Angeles Manager.

Below are some of the executive personnel and the service pin winners. Seated in center of lower row is J. Y. Baruh, Vice Pres. Second from left in back row is Andy Olson, Los Angeles Production Mgr. Between Mr. Bankus and Mr. Remmers in back row is Ellen P. Scott, Mr. Remmers' secretary.

● With 3,916 U. S. employees holding service pins, denoting association with the Crown Zellerbach Corp. for five to 50 years, it is only logical that top executives should now be giving much time to the continuation of that long range planning which has made such management-employee relationship possible.

So said Albert Bankus, vice president, addressing a pin dinner for Crown Willamette Paper Co., Los Angeles division of Crown Zellerbach Corp., Mar. 16 at the Mayfair Hotel, Los Angeles. Accompanying him from San Francisco were J. Y. Baruh, vice president, and Frank Drumb, public relations director. Host was Lester E. Remmers, Los Angeles manager.

One activity which could now be discussed publicly, he said, was first installation on the Pacific Coast of a facial tissue machine—to be supplied by Beloit Iron Works—at Camas, and which, when set up will represent an investment of \$1,000,000. Revamping and extension of plants throughout the company's territory to make new and better grades of paper are part of the post war plans.

Mr. Bankus said the company's forward thinking was based on two things; Assurance of raw material by intelligent forest management; and constant progress in converting pulp into new and better grades of paper and other products.

He declared that the company, for the second time, had investigated timber lands in Alaska and that while this represented difficult problems, it still was considered a potential source of future supply.

Vice President Baruh presented service pins. Operating Manager Andrew W. Olson received a 25-year pin. Miss Ellen Scott, secretary to Mr. Remmers for 17 years, was awarded a 20-year pin.

Other pin winners: John Macchio, 30 years; Bennie DeStefano and Mike

Diaz, 25 years; Norman E. Glass and Hallie Burleigh, 15 years; Herbert Barnes, Samuel Schlador, Lewis Joseph, Whitney Merritt, 10 years; Jane Brocker, Jues Domeeg, Lester Radideau, Ruth Schuricht, Wayne Smith, Louise Ira, Jack Whittaker and Jennie Kissel. Six of these were awarded pins by proxy, being on military leave.

Suggestion Awards

● Powell River Co. has made several more suggestion awards to employees.

J. S. Gahan won \$75 for suggesting improvement in the method of attaching the buckets to the main belt on the chip elevator so as to prevent rivets being torn out on the main sheave. George Higgins received a similar amount for suggesting a change in the method of grinding the bottom slitter in the winder on paper machines so as to give longer periods between the machine grinding intervals.

Greater C-Z Pension Plan Now Open to All Employees

● The Crown Zellerbach Corporation Retirement Plan, available to company employees upon completing five years' service, is announced.

Benefits for service rendered prior to the inauguration of the plan will be paid entirely by the company. Benefits for future service will be financed partly by employee deposits and partly at the company's expense. Participation in the plan will be optional.

Those who participate will deposit into the plan 2% of their annual pay up to \$3,000 and 4% of annual pay over \$3,000. Deposits will accrue interest at 2% and will be refunded upon withdrawal from the plan, leaving the company's employ, or upon death, to the employee's beneficiary.

The cost of the plan will vary each year but for the first year, it is estimated at about \$1,000,000, of which around \$200,000 will be defrayed by the employee deposits, the balance being paid for by the company.

The plan will be directed by a committee of officers and employees. Contributions will be deposited with the Bankers Trust Co., New York.

With inauguration of the plan, all employees aged 60 and under will retire upon reaching age 65. Those 61-65 years old will retire after working five more years. Employees over 65 will retire at 70. Optional earlier retirement with smaller benefits is provided.

B. C. Pulp & Paper Co. Operated At 74%

● Operation of the Woodfibre and Port Alice plants of the British Columbia Pulp & Paper Co. in 1944 averaged only about 74 per cent of capacity owing to restricted availability of necessary materials, according to President Lawrence Killam.

Mr. Killam also announced purchases of various small blocks of timber were made during the year and contracts made with logging operators for the cutting of this timber, with cash advances made in some instances.

Pilz in San Francisco

● William J. Pilz, president of the Everett Pulp & Paper Co., Everett, Wash., accompanied by Mrs. Pilz, was a San Francisco visitor last month.



THESE PULP AND PAPER INDUSTRY LEADERS were among 50 guests at dinner recently at Everett (Wash.) Country Club, given by Sumner Iron Works. E. I. Flateboe, President, thanked company's patrons for tolerance they showed in recent years, when Navy work took priority in Sumner shops.

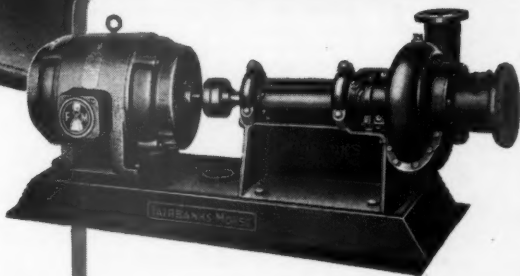
Left to right—Frank F. Sumner; Mr. Flateboe; George Tostevin, Asst. Secy., Soundview Pulp Co.; Russell J. LeRoux, Mgr., Everett mill, Pulp Div., Weyerhaeuser Timber Co.; J. H. McCarthy, Res. Eng., Soundview Pulp Co.; Orville E. Fox, Office Mgr., Everett mill, Weyerhaeuser Timber Co.; Miles S. Mitchell, Sumner Iron Wks.; Wm. J. Pilz, Pres. and Mgr., Everett Pulp & Paper Co.; and Anson B. Moody, Vice Pres. and Asst. Mgr., Everett Pulp & Paper Co.



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The Changing Pattern in Wood Pulp Production

By REX VINCENT

Technical Consultant, Bulkley, Dunton Pulp Co.

● A discussion of such a topic as this requires some preliminary statements in the way of definitions and sources. First there is the period of time, which is frequently overlooked. When one speaks of "pre-war" it must always be remembered that one is speaking of a time that existed nearly six years ago. Now, that is not the ancient past but, in the paper industry, it falls into the classification of a "long time ago." During a like period, even in peace time, many changes take place—changes in personnel, in management, in production rates, in types of paper made and consequently in the types of pulp purchased. Since "pre-war" was nearly six years ago and "post-war" in the sense of normal commerce might be two years hence, we might consider the interval of war influence as being a period of 8 to 10 years. During that time everything in our industry has been upset and since there is a high degree of familiarity with the meaning of the term "upset," further explanation is unnecessary.

In ten years it is possible for new habits to be formed, new associations, new and different patterns of thinking to be acquired, and all these have had, and will have, their effects on the subject under discussion. For example, the idea has been formed, during this time, that the U. S. is largely self-sufficient in wood pulp and this is usually qualified by the remark "if you include Canada."

The descent into our present day turmoil was very gradual, so gradual that current paper quality is not thought so bad until someone brings out a sample made in 1940. These things are stated to help emphasize the point that it is difficult for any group or association of individuals to go back to previous practice. The change is made forward from the present position.

It is questionable as to whether trends which were in evidence up to 1940 are of much value, yet they must be used to determine which direction the industry was following. This is the only right method for learning what the war has interrupted in the trend of pulp utilization.

As to sources used for our figures, we have referred to statistics of the U. S. Pulp Producers Assn., the WPB, the Bureau of Census, the APPA and other similar material published by agencies, associations and trade journals.

The decade 1930-1939 brought about several interesting changes in pulp utilization.

1. Unbleached kraft production in the U. S. increased 202% during those ten years.
2. Bleached kraft production in the U. S. increased 547% during the same period.
3. All pulp production in the U. S. increased only 54%.
4. In 1930, imports of unbleached kraft formed 31% of our total kraft consumption but by 1939 this had dropped to 17.5%.

Thus, during that 10-year period, unbleached kraft consumption increased about four times as much as total pulp consumption, while bleached kraft increased ten times as much. The domestic production increases are reflected in diminishing kraft imports. This trend in kraft, so emphatic before the war, has continued during the war, due largely to the packaging requirements of the services and their need for strong, highly specialized papers. Added to this was the almost complete lack of imports.

This rate of expansion in kraft pulp should be examined further, particularly as regards market pulp and total pulp. Total

pulp is all the production, plus imports, less exports, while market pulp is only that pulp available on the market and is composed of all domestic sales, plus all off-shore imports, plus 50% of Canadian imports, as it is estimated that the other 50% from Canada goes to affiliated consumers. These figures are shown in the table accompanying this article.

Figures in the table demonstrate that the increase in pulp production over the past five years has been largely integrated kraft production and shows that the trend established before the war has continued through the war years. In other words, we see that more and more kraft papers are being made in integrated mills and must conclude that as time goes on there will be less and less domestic kraft pulp for sale. These mills who must buy kraft pulp will be looking to imports for their major source of supply.

A further check on these trends in kraft pulp can be obtained by examining data from the Department of Commerce and the WPB on the components of various grades of paper and paperboard. In 1939 bleached kraft formed no part of book papers, and only 1.4% of fine papers; by 1944 these figures had changed to 12.6% of book paper and 9.5% of fine paper.

Therefore, on sulphate pulps these conclusions can be drawn:

1. The expanding production indicated will continue for some time and most of the new pulp production will be in sulphate.
2. There will be a greatly expanded use of bleached kraft pulp.
3. Most of the kraft pulp, bleached and unbleached, purchased by consumers, will be imported.
4. The large volume kraft papers, such as bag, wrapping, etc., will be produced in integrated mills.

Sulphite Pulp Forecast

● In sulphite, the tendencies have been different in several ways. The proportion of sulphite being used, as compared to total pulp, averaged 38% during the early thirties. In 1940 this had fallen to 31.4% and for 1943 it was 29.6%. Thus, the expansion in sulphite during recent years has not kept pace with that in kraft. There has also been a change within sulphite that is kindred to a change within sulphate and that has been the increasing production of bleached pulps. On the whole, the consumption of unbleached sulphite has been fairly constant with only a slight downward trend in the years just prior to 1941. This could be caused, in part, by the steadily increasing tonnage of box board which used far more waste than pulp. On the other hand the consumption of bleached sulphite in the manufacture of paper had been steadily increasing in a direction that, up to 1941, was obvious to everyone in the industry.

This development has had its effects on the producers of pulp who have installed bleach plants or were about to convert when the war came. In Sweden, the conversion to bleached pulps and still further, to dissolving pulps, has been going on apace during the war. Sweden has just about doubled her capacity for dissolving pulps and will probably exhibit a strong desire to sell that quality in this market. Before the war these pulps were nearly all sold on the continent.

As you can probably see by now the developments in sulphite are mixed. They are complicated by the rising bleached production which is conflicting with the increased use of bleached

RATIO SULPHITE TO SULPHATE TOTAL AND MARKET

| | 1939 | 1940 | 1941 | 1942 | 1943 |
|----------------------|-----------|-----------|-----------|-----------|-----------|
| U. S. Produced | | | | | |
| Total Sulphite..... | 1,946,452 | 2,607,789 | 2,918,780 | 2,930,272 | 2,436,502 |
| U. S. Produced | | | | | |
| Total Sulphate..... | 2,962,657 | 3,747,992 | 4,526,611 | 4,738,266 | 4,235,724 |
| Ratio { Sulphite | | | | | |
| { Sulphate..... | .657 | .696 | .645 | .618 | .575 |
| Market Sulphite..... | 1,451,221 | 1,215,900 | 1,346,207 | 1,202,625 | 895,998 |
| Market Sulphate..... | 737,654 | 463,192 | 410,466 | 444,662 | 339,915 |
| Ratio { Sulphite | | | | | |
| { Sulphate..... | 1.967 | 2.625 | 3.279 | 2.705 | 2.636 |

sulphate and the switch from bleached paper pulps to dissolving pulps. This latter development has been aided by the pulp producers' desire to get as much dollar return from his forests as possible and there has also been an insistent rising demand for viscose rayon pulp. In 1940 the consumption of these pulps was equal to 16% of bleached sulphite capacity and in 1942 it was 21%. It is expected that this will rise to at least 25% in post-war years.

It is believed that because of the conflict between bleached sulphite and bleached sulphate, the rising trend in bleached sulphite will be reversed in the postwar years to a degree depending on how rapidly the production of bleached sulphate can be increased and how close together the two pulps become with respect to price.

Unbleached sulphite seems due for an increased utilization because of several factors. Some of these are reflected from the discussion above, but others are such influences as increased production of groundwood papers, particularly those based on the new bleached groundwood. A factor which will probably have an effect on this pulp is the planned expansion in the production of machine coated papers. It should be pointed out that this opinion is at variance with that expressed by a statistical research organization.

A development which lies in between bleached and unbleached sulphite and which was just beginning to appear before the war is semi- or partially-bleached sulphite. This pulp was made by several mills at that time; some for experimental purposes and, in one case, the bleaching was used in connection with hydraulic barking. This pulp was really different in more ways than just color. As a matter of fact, the difference in other characteristics was greater than the difference in color. Good, bright, unbleached sulphites before the war were running in the neighborhood of 60-62 G.E. Brightness and the partially bleached pulps were never much above 65. But the color was light fast and on the yellow side which resulted in brighter papers when tinting colors were used. The physical characteristics were changed by the bleaching so that the pulp was stronger in nearly all respects. Some consumers reported that this pulp reacted in beaters and jordsans much the same as a Mitscherlich pulp.

Semi-bleached sulphite will undoubtedly reappear after the war. We have already had evidence that several Swedish mills intend to produce it. There is another possibility and that is hydraulic barking. This method of barking, along with whole log chipping, is so great a step toward full utilization of timber that pulp mills must adopt it. They cannot disregard the 20% saving in wood since that means a 20% addition to their timber reserve. But hydraulic barking and whole log chipping is not an unmixed blessing and it may some day be desirable to top it off with a partial bleach on the pulp.

Of course, pulp imports will reflect all these things. There will be semi-bleached krafts as well as semi-bleached sulphite. There will be increased offerings of hardwood pulp as it becomes necessary to fill out a diminishing supply of spruce. There will be more of what are called "special" pulps—pulp designed for a particular use. These tendencies are somewhat opposed to the trends in import pulps before the war when they consisted primarily of straight prime unbleached sulphite and the same kind of unbleached kraft. Immediate postwar imports will be simply "pulp and all we can get" until the first thirst is satisfied and then the imports will begin to reflect the desires of the producers which are, in general, to raise the level of quality and price for their pulps. It is very unlikely that there will ever again be a surfeit of middle and low grade foreign pulps seeking a buyer in this market. Proof of this lies fundamentally in the timber reserves of the major pulp producing countries. These are too limited now, and will be more so at the end of the war, to permit cutting merely for the sake of continuity in mill operation. It will take many years for the forests in Europe to catch up with the devastation and over-cutting of this war, and the reconstruction work will require vast quantities of paper.

Thus, in general, while pulp may not be scarce or short, it will hardly be plentiful. The Neubrech Report, issued by the Department of Commerce (Feb. 1944 PULP & PAPER INDUSTRY), indicates a rather narrow balance for the world. Any disruption in shipping facilities could easily upset this balance, causing acute shortages in certain areas.

During this period—the first three years after "V" Day, the trends which have been mentioned will not be as pronounced as they will later on. Trends established during these war years will probably continue, gradually changing as the supply of pulp increases. Following a natural line, the industry's increasing supply will bring with it variations and improvements in qualities outlined. The full effects of the trends established in this country will not be fully realized for some time because they require new production facilities and expansion to current plants. The heavy machinery required for this will not be available for some time after "V" Day.

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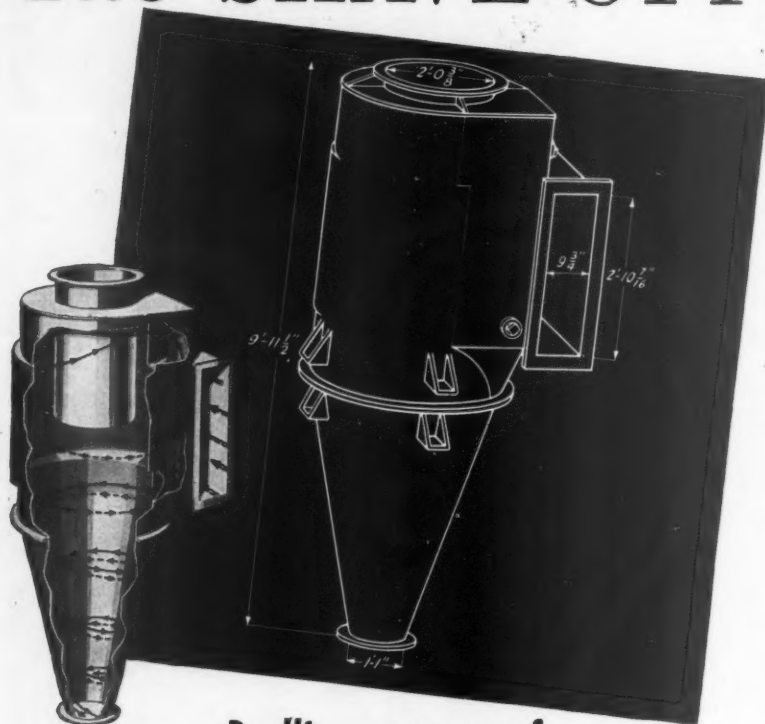
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This exclusive feature of the patented Buell (van Tongeren) cyclone is a prime factor in Buell's well-known high recovery efficiency.



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NO CLOGGING

Virginia Town Establishes Municipal Forest

● Salem, Va., has established a municipal forest, said to be the first in Virginia. The Mowles farm, south of Mount Regis, is to be reforested in cooperation with the Virginia Forest Service.

The estimated cost to the town will be around \$1,000 for the clearing of the land, 278 acres, and planting 30,000 trees — 10,000 shortleaf pine, 10,000 tulip poplar and 10,000 white pine.

More than half of the timber in Virginia is cut on farm woodlands.

There are slightly over 25 million acres of land in the state, 13 million acres of which are privately owned forests. About 7,000,000 acres of the forest land is owned by farmers. Actually, farm woods represent about 51 per cent of the entire forest area of Virginia. They are by far the most productive woodlands in the state.

Virginia Rural Students To Learn Forestry

● Four areas of Virginia, comprising 271 acres of woodlands, have been set aside to teach sound forestry practices and pulpwood production to high school students in Virginia's rural schools.

Teachers of vocational classes in 17 counties contingent to these areas will be trained for this instruction during the summer and the classes will start next fall.

Western Forest Laboratory Organization Is Formed

● A Forestry Products Foundation, with offices in the Forestry Bldg., Salem, Ore., has been formed with Herbert J. Cox, of Eugene, president, and Dean Paul M. Dunn of the forestry school, Oregon State College, vice president.

These and four others, to be named later, will be trustees. A campaign will be conducted for funds to build a Forest Products Laboratory at Oregon State College.

Research will be carried on to eliminate wood waste and find new woods products for interested pulp and paper or other woods industries, to be financed by interested parties. Patent rights for such parties will be adequately protected.

Public Buys Up Stock In Powell River Co.

● Departing from traditional policy, Powell River Co., operated since its inception 34 years ago as a family corporation, invited public participation in stock ownership recently when 300,000 shares of common stock was offered in Vancouver, B. C., by the Canadian investment house of Wood, Gundy & Co., at \$18.50 a share. The issue was quickly over-subscribed.

President Harold S. Foley said that the issue would not in any way alter the capital position of the company.

Warren Man Is West

● Francis Howe of Cleveland, representative of the S. D. Warren Paper Co. of Boston, was a Pacific Coast visitor last month.

Heads State College

● Wilson M. Compton, for 25 years executive director of the National Lumber Manufacturers Assn., and champion of forest industries has resigned that post to become president of Washington State College, Pullman, Wash.

Men's Club of So. California Finances Orphans' Workshop

● The Paper Mill Men's Club of Southern California donated \$500 to the Los Angeles Orphans' Home Society as a result of the club's annual Hi-Jinks held recently. The gift was for establishment of a manual training shop for orphan-age boys.

In a letter to Ancil Ernst, Everett Pulp & Paper Co., and president of P.M.M.C., Eleanor Macauley, recording secretary, said:

"The generous gift of your club has made our dream of a long time become a reality and we are overjoyed. The occupation of our boys in a manual training shop during the summer vacation has solved a serious problem because our summer cottage at Manhattan Beach is necessarily closed to us.

On March 29 the club had its nomination meeting at Hotel Cabrillo, Los Angeles. Officers for the coming 12 months' term were to be elected at the Oakmont Country Club, Glendale, April 18. For the March meeting 35 members turned out, among them nine of the 10 past presidents.

Western Paper Converting

● Warren Butler, recently discharged from the Army, where he had been a second lieutenant in the Air Corps, has been appointed northern California representative of the Western Paper Converting Co., Salem, Ore., with headquarters at 7 Front St., San Francisco. Mr. Butler takes the place of Arthur H. Colton, recently resigned.

PUGET POWER RATES ARE LOW



ELECTRIC COSTS DOWN 42%

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FRANK McLAUGHLIN,
President

PUGET SOUND POWER & LIGHT COMPANY



HARRY I. THORSON, Purchasing Agent, for northern Washington mills, Crown Zellerbach Corp., 811 White Bldg., Seattle 1.

Two P.A.'s In Seattle

● Under a new division of purchasing for Crown Zellerbach Corp., in Seattle, Stanley Ringheim has moved from downtown offices to the new quarters of the company's Central Engineering Dept., 5900 West Marginal Way, Seattle, and will be purchasing agent for that department.

H. I. Thorson has taken Mr. Ringheim's place as purchasing agent for northern mills in offices at 719 White Bldg. Formerly Mr. Ringheim's assistant, Mr. Thorson has been with Crown Zellerbach Corp. since 1937.

14 Added to Rolls of Powell River 25-Year Club

● Second annual meeting of the Powell River 25-Year Club was held at Powell River, B. C., March 10, when 14 more employees of Powell River were admitted to the club and presented with inscribed gold watches.

Presentations were made by D. A. Evans, resident manager, supported by Russell M. Cooper, general superintendent, George Patterson, oldest employee, and John McIntyre, acting president of the club.

Special guests were E. M. Paukert, resident manager, and L. A. Gauthier, groundwood superintendent, Abitibi Power & Paper Co., Iriquois Falls, Ont.; and two Powell River employees on leave, Squadron leader J. A. Kyles and Lieut. Ken Barker.

Awards were made to John Roberts, lubrication division; W. E. McGillivray, groundwood superintendent; James Armstrong, groundwood screen division; Harry L. Dicker, superintendent of plant railways; Art G. Farnden, barker mill; James Innes, saw filer; William Wallace, beater room; Chas. H. Beecroft, express office; R. J. Southcott, carpenter foreman, townsite; Len Donkersley, sprinker division; George F. Russell, log scaler; Horace H. Foster, townsite construction; Harry Sandifer, accounting office, and posthumously to Harry Donkersley, welding division, who died in February. The club now has 71 members, of whom 69 are still employed.

Fritz Goes to L. A.

● William "Bill" Fritz, for the past nine years a clerk in the order department of the Camas, Wash., mill of Crown Zellerbach Corp., has accepted a position as assistant superintendent of the Southland Paper Converters, Los Angeles.

BMT Sales Manager

● Appointment of L. W. Nystrom as sales manager of Blake, Moffitt & Towne, Inc., Tacoma, Wash., is announced by L. V. Hall, vice president, who said, "Roy Nystrom came to work for us in 1922 and his promotion is a reward for his many years of faithful service."

POSITION WANTED — Paper Mill Supt. wishes to move to West Coast. Twenty-five years' experience on book, bond, news, writing, tissue and board. Expert on color. Take full charge of mill, Fourdrinier or Cylinder. Write P. O. Box 432, St. Cloud, Minn.

WANTED: Paper mill chemist for middle west combined paperboard mill, carton and container plant; laboratory research and development. Address Box 3, care Pulp and Paper Industry, 71 Columbia St., Seattle 4, Wash.

Schwarz Opens Branch

● Schwarz Paper Co., Chicago distributors and mill agents, has opened a branch house in South Bend, Ind., under management of Alfred C. Gill, former vice president of Central Ohio Paper Co.

This announcement follows closely a recent statement by Sidney L. Schwarz, president, in which he said, "Larger merchants are developing chains of branch houses. By increasing their buying power and widening their distribution facilities, they enhance their value to manufacturers."

Budge's New Duties

● E. D. "Don" Budge, assistant manager, wrapping paper dept., headquarters division, Zellerbach Paper Co., San Francisco, and assistant to T. J. Finerty, vice president, resigned as of May 1.

Mr. Budge has been appointed regional distributor for Better Packages Inc., manufacturers of gummed tape sealing equipment and, later, will move from San Francisco offices to Los Angeles.





"GO EASY WITH THE HEAT!"



It takes about a bucketful of sap and a lot of cooking to make a cupful of maple syrup. But if the heat is too great or if it is continued one little minute

too long the syrup is changed into a brittle mass of crystals. » » It takes about 100 tons of water to make one ton of paper. Therefore, it is common sense to rely upon suction at the wet end and pressure at the felt to reduce the load upon the drier rolls. Too much heat makes brittle paper. » » Here is where Hamilton Felts demonstrate their superiority. Hamilton Felts are so constructed that they carry off more water in less time. This, of course, means less broke and higher speed. Even more important is the reduction in the heat needed to complete the drying operation without "crystallizing" the finished product . . . And this obviously means better paper at lower cost.

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